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Aerodynamic Interactions From Reaction Controls for Lateral Control of the M2-F2 Lifting-Body Entry Configuration at Transonic and Supersonic Mach Numbers

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NOTATION

The data on the lateral-directional characteristics are referred to the body system of axes. The moment center is located at 55% of the body reference length from the nose (49.6% of the actual length) and 7% of the length below the cone axis. The reference length and area are based on the length and area of the basic M2 (see ref. 4). Zero angle on all control surfaces is defined as the position where the control surface is tangent with the model surface at the control hinge line. The coefficients and symbols used are defined as follows:

A^* nozzle throat area

A_e nozzle exit area

b reference span, 24.2 cm (0.793 ft)

C_l rolling-moment coefficient, $\frac{\text{rolling moment}}{qSb}$

C_m pitching-moment coefficient, $\frac{\text{pitching moment}}{qSl}$

C_n yawing-moment coefficient, $\frac{\text{yawing moment}}{qSb}$

l reference length, 50.8 cm (1.667 ft)

M free-stream Mach number

p_c nozzle chamber pressure, kN/m^2

p_j jet exit static pressure, kN/m^2

p_r $\frac{p_j}{p_\infty}$, jet exit static to free-stream static-pressure ratio

p_∞ free-stream static pressure, kN/m^2

q free-stream dynamic pressure, kN/m^2

Re Reynolds number, based on reference length l

R gas constant, N-m/kg-K

S reference planform area, 896 cm^2 (0.9647 ft^2)

s spanwise location of jet nozzles measured from centerline

T gas total temperature, K

α angle of attack, referenced to the cone axis, deg

β angle of sideslip, referenced to the cone axis, deg; $\sqrt{M^2 - 1}$

γ specific heat ratio, $\frac{C_p}{C_v}$

δ_a differential deflection angle of upper flap for aileron control $\left(\delta_{u_R} - \delta_{u_L}\right)$, right roll is positive aileron, deg

δ_j $\Theta_N + \Delta\nu$, initial jet-flow inclination angle (see appendix), deg

δ_l deflection angle of lower flap, trailing edge down is positive (see fig. 2(b)), deg

δ_r differential deflection angle of rudders $\left(\delta_{r_L} + \delta_{r_R}\right)$ each rudder deflects only outward, left rudder is positive, deg

δ_{rf} rudder-flare deflection angle $0.5\left(\delta_{r_L} - \delta_{r_R} - |\delta_r|\right)$, deg

δ_t cant angle of nozzle, referenced to model plane of symmetry, deg

δ_u average deflection angle of upper flaps, $\frac{\delta_{u_R} + \delta_{u_L}}{2}$, deg

Δ incremental value

Θ_N nozzle exit internal wall angle, referenced to nozzle centerline (see fig. 2(d)), deg

ν Prandtl-Meyer angle, deg

Subscripts

f full scale

j conditions at jet exit

L left

m model

R right

AERODYNAMIC INTERACTIONS FROM REACTION CONTROLS FOR LATERAL CONTROL OF THE M2-F2 LIFTING-BODY ENTRY CONFIGURATION AT TRANSONIC AND SUPERSONIC MACH NUMBERS

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SUMMARY

Wind-tunnel tests were conducted to determine the interaction of reaction jets for roll control on the Ames M2-F2 lifting-body entry vehicle. Moment interactions are presented for a Mach number range of 0.6 to 1.7, a Reynolds number range of 1.2×10^6 to 1.6×10^6 (based on model reference length), an angle-of-attack range of -9° to 20°, and an angle-of-sideslip range of -6° to 6° at an angle of attack of 6°. The reaction jets produce roll control with small adverse yawing moment, which can be offset by the horizontal thrust component of canted jets.

INTRODUCTION

Lifting-body entry vehicles entering the atmosphere will depend on reaction controls for pitch, yaw, and roll control until the aerodynamic controls take effect. Consideration has been given to employing reaction controls throughout the flight envelope for nontrimming control, that is, pitch damping and roll and yaw control. The direct effects of the thrust of reaction jets on the forces and moments of the vehicle can be readily estimated. The interference effects of the reaction jets on the aerodynamics of the vehicles are not readily determined. Previous studies have been made of the effects of a jet issuing perpendicular to a flat plate,[1] but little has been done in an area as complicated as the aft portion of a lifting body.

Prior wind tunnel and flight testing of the Ames M2-F2 lifting body has indicated that the degree of roll control with the ailerons was adequate, but that the adverse yaw associated with the ailerons was undesirable (refs. 1 to 4). This was an important factor leading to the crash of the M2-F2 flight vehicle.

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[1] Reichenau, David E. A.: Interference Effects Produced By a Cold Jet Issuing Normal to the Airstream from a Flat Plate at Transonic Mach Numbers. AEDC-TR-67-220, October 1967. No Foreign Distribution.

The present investigation was undertaken to determine the interaction effects of reaction control jets used for roll control. Two gases, CO_2 and air, were used in the jet simulation. The effect of jet nozzle position on these interactions at various elevon and rudder control deflections was investigated through a range of angles of attack and sideslip.

MODEL

Photographs of the 1/12-scale model of the M2-F2 are shown in figure 1 and the model dimensions are presented in figure 2. The model was constructed of a fiberglass shell fitted to a steel plate that incorporated a mounting for a six-component strain-gage balance. The lower flap of the model was built in two sections; the sections were flat and were not curved at the edges to fit the body contour, as shown in the drawing. The two sections of the lower flap were always deflected together and the center gap was always taped closed. All control hinge lines were always sealed. Zero angle on all control surfaces is defined as that position where the control surface is tangent with the model surface at the control hinge line.

The reaction control jets were simulated by the use of cold gas flowing in converging/diverging nozzles. The location of the nozzles relative to the aft surface of the model is shown in figure 2(c). The design of the nozzles is discussed in the appendix. Figure 2(d) illustrates a typical nozzle configuration and gives the pertinent dimensions for both nozzles.

The nozzles were supported from the sting (fig. 1(c)). The nozzles were not in contact with the model, so no nozzle thrust loads were taken on the balance.

TESTS

The tests were conducted in the Ames 6- by 6-Foot Wind Tunnel over a Mach number range of 0.6 to 1.7. Most of the data were obtained in a Reynolds number range of 1.2×10^6 to 1.6×10^6 based on model reference length with some data obtained at Reynolds numbers up to 4.5×10^6 based on model reference length. Aerodynamic characteristics were measured through an angle-of-attack range of -9° to 20°, and through an angle-of-sideslip range of -6° to 6° at an angle of attack of 6°.

The gases used for jet simulation were air and CO_2. High pressure air was used for the major portion of the testing because a large quantity was readily available. Carbon dioxide was selected because the specific heat ratio ($\gamma = 1.28$) was near that of decomposed hydrogen peroxide ($\gamma = 1.27$). Carbon dioxide was used for a limited portion of the test in an effort to assess the quality of the simulation obtained by the use of air and to evaluate the effect of changing the propellant gas specific heat ratio. The pressure ratios (jet static to free-stream static) were selected to simulate the conditions of the flight envelope of the M2-F2 vehicle, as shown in figure 3.

A comparison of the thermodynamic and gas dynamic parameters of the full-scale and model jets is given in table 1.

The tests were conducted with a boundary-layer transition strip of grit particles around the forebody, 10 cm back from the nose, and a strip on each side of the leading edge of each edge of the vertical surface.

CORRECTIONS AND ACCURACY

The angles of attack and of sideslip of the model were corrected for stream-angle effects. No base pressure adjustments were made to the data.

The uncertainties in the test results, based on calibrations and the repeatability of the data, are estimated to be as follows:

Test condition uncertainty	
Mach number	±0.01
Angles of attack and sideslip, deg	±.1
Control angles, deg	±.3

Data uncertainty

Data parameter	Nominal Mach number						
	0.25	0.6	0.8	0.9	1.1	1.3	1.7
Yawing moment	±0.0010	±0.0005	±0.0005	±0.0008	±0.0005	±0.0003	±0.0003
Rolling moment	±.0024	±.0015	±.0007	±.0007	±.0009	±.0003	±.0003
Pitching moment	±.0005	±.0005	±.0005	±.0025	±.0010	±.0010	±.0005

RESULTS AND DISCUSSION

Figures 4 and 5 illustrate the variation of the jet interactions with angle of attack for two of the configurations tested. Data for the other configurations are presented in table 2. Figures 4 and 5 show that the downward-firing jet on the left produced most of the jet interactions for the variables considered in this investigation. The moment increments are nearly independent of angle of attack except near Mach 1.0 at negative angles of attack, as illustrated in figures 4(c), 4(d), 5(c), and 5(d).

Effect of Jet Exit Pressure Ratio

Figure 6 illustrates the effects of jet-exit pressure ratio on the moment interaction for three values of free-stream Mach number. The effect of increased jet-exit pressure ratio on the model is interpreted as the effect of increased altitude on the flight vehicle. The values of altitude shown on the

second abscissa scale are based on an assumed value of 2.117×10^6 N/m^2 for flight vehicle nozzle chamber pressure.

The effect of increased jet-exit pressure ratio or increased altitude at a constant Mach number is seen to be generally an increased interaction, either positive or negative.

Figure 7 illustrates the effect of Reynolds number on the jet interactions at Mach numbers of 0.6 and 1.1. Reynolds number has no significant effect on the jet interactions at these two Mach numbers.

Jet Simulation Comparison

Results are shown in figure 8 for nozzles Nos. 1 and 2 at the outboard location with no canting. Nozzle No. 1 was designed to simulate the full-scale jet with air as propellant. Nozzle No. 2 was a scale model of the flight hardware with CO_2 as propellant (table 1). It was expected then that nozzle No. 1 with air and nozzle No. 2 with CO_2 would cause about the same amount of aerodynamic interference, if indeed the significant jet parameters were being simulated. Figure 8 illustrates that these two configurations give results that are in quite good agreement.

It is also noted in figure 8 that when air was used as propellant in nozzle No. 2 the interaction in general tended to be somewhat larger in magnitude than with the other two configurations. The increased magnitude of the interaction is attributed to the increased nozzle exit momentum and mass flow. The exit mass flow and momentum are proportional to $\gamma_j M_j^2$. The value of this parameter, as is shown in table 1, was considerably larger with air flow in the No. 2 nozzle than with either of the other two configurations.

Figure 9 presents a comparison of the interactions caused by the air simulation and the CO_2 simulation with the nozzles canted 15° and the left-hand nozzle moved into the 61% semispan location. It is seen that the agreement again is excellent over the range of α and Mach numbers with the exception of α less than about 6° at Mach 0.9.

The effect of canting the nozzles is illustrated in figure 10. Upward-directed nozzles outboard and downward-directed nozzles inboard (see fig. 2(c)), to provide a favorable yawing moment from the horizontal thrust component, also decrease the interaction increments. Most of the reduction was with the downward-directed nozzle. The degree of canting for the flight vehicle would be dependent on a study of handling characteristics as to how much favorable yawing moment is desired.

Figures 11 to 13 show that spanwise location of the nozzle has a considerable effect on the interaction increments. Movement of the downward-directed nozzle inboard reduces the increments throughout the Mach number range. The interaction increments due to the upward-directed nozzle increase with inboard movement at subsonic Mach numbers and decrease at supersonic Mach numbers. The nozzle positions resulting in the smallest interaction increments through the Mach number range are the upward-directed nozzles in the

most outboard location and the downward-directed nozzles in the most inboard location tested. The larger interaction increments of an intermediate location of the downward-directed nozzle may be acceptable with the larger roll effectiveness of the longer moment arm.

The influence of deflection of the upper and lower flaps may be seen in figure 14. Except for $M = 0.9$, flap deflection does not produce any large effect on the interactions or any noticeable trends with deflection. At $M = 0.9$ there is a reduction of the yawing- and rolling-moment interaction with a reduction of the lower flap deflection.

Rudder deflection (fig. 15) and yawing of the model (fig. 16) had little effect on the interactions.

A comparison of lateral-directional control with reaction jets and with aileron is shown in figure 17. The flight vehicle, without the center fin, required rudder-aileron interconnect to counteract the adverse yaw. Reaction jets of nearly twice the thrust of those simulated would be required to give the same roll power as 20° of aileron.

CONCLUSIONS

Results of an investigation of the use of reaction jets for roll control on the M2-F2 lifting-body vehicle can be summarized as follows:

1. Reaction jets for roll produced favorable rolling-moment interactions, and unfavorable yawing-moment interactions.

2. Jet simulation with either air or CO_2 produced similar interactions when jet static pressure ratio, angle of nozzle exit flow, and the parameter $(\gamma M^2/\beta)_j$ were matched to full-scale values.

3. The interactions are nearly constant with angle of attack except near Mach 1.0 at negative angles of attack.

4. Canting of the nozzles reduced the interactions and provided favorable yawing moments from the horizontal components of the thrust.

5. Inboard movement of the downward firing nozzles reduced the interactions at all Mach numbers. Inboard movement of the upward firing nozzles reduced the interactions at supersonic Mach numbers and increased interactions at subsonic Mach numbers.

6. Deflection of control surfaces had no appreciable effect on the interactions.

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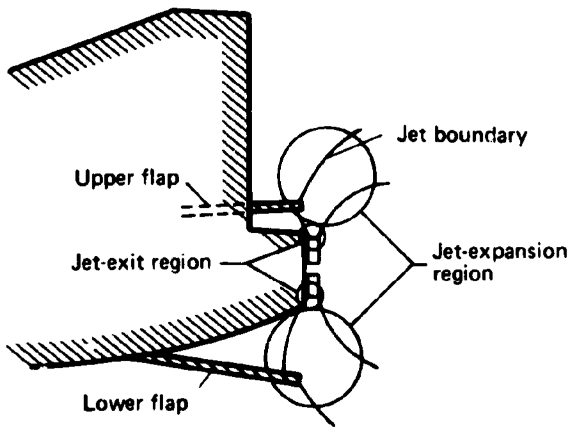
APPENDIX

NOZZLE DESIGN

Testing reaction controls on the M2 model required the simulation of hot gas jets in order to evaluate the aerodynamic interference caused by these jets. The flight vehicle reaction-control rockets use hydrogen peroxide as propellant. Decomposed hydrogen peroxide results in a mixture of superheated steam and oxygen. This mixture has a specific heat ratio of approximately 1.27, a total temperature of 1013.9 K, and a gas constant of 374.9 N-m/kg-K. It is not possible to duplicate all these properties with a cold gas. For example, air has a specific heat ratio of 1.40 at 288.9 K and a gas constant of 287.3 N-m/kg-K. It is seen that none of the values for air compare favorably with those of decomposed hydrogen peroxide.

Jet simulation on a model involves two separate problem exercises. The problems are usually caused by the fact that the model jet is a different gas and has a different specific heat ratio than the full-scale jet. Because of this it is not possible to duplicate the full-scale jet in every respect. Therefore, the investigator must first evaluate the circumstances and determine which of the full-scale jet characteristics are important and will affect the result of the investigation. Secondly, the investigator must select a propellant gas and design nozzles for the model such that the most significant of these important jet characteristics are duplicated. This is necessary, even after careful evaluation and selection of parameters, because all the desired jet characteristics cannot usually be duplicated.

Evaluation of the M2 configuration (fig. 2(a)) indicated that the jet characteristics that influence jet-exit effects and upstream (windward side with jet exiting normal to a flat plate) interference effects are the most important. Jet-exit effects are generally considered to be those effects that are not influenced by jet-free-stream mixing action, usually a distance of the order of one or two jet diameters downstream, along the nozzle centerline, from the nozzle exit (sketch (a) below).



Sketch (a)

Jet-exit effects could influence the model base pressures near the jets and upstream interference effects from the jet expansion region would affect the pressure on the upper and lower flap surfaces of the vehicle forward of the jets. For a jet exhausting normal to a surface (see footnote 1), it is found that upstream interference effects caused by the jet are much easier to duplicate than are downstream (leeward side of jet) effects. In other words, if only upstream effects are of concern, the jet simulation need not be as exact as if downstream-interference duplication is also required. It is also concluded from this reference that the best duplication of upstream interference is achieved when values of p_j/p_∞, δ_j, $\Delta\nu$, and exit momentum are duplicated. In reference 5 it is pointed out that matching of p_j/p_∞ and δ_j is required if jet exit effects are to be duplicated between model and full scale.

Reference 6 is a summary and a review of various techniques used for jet simulation in ground test facilities. This reference indicates that there is a strong requirement for the duplication of p_j/p_∞, δ_j, $(\delta M^2/\beta)_j$, $(RT)_j$, and jet-exit momentum when evaluating aerodynamic interference effects. The importance of these parameters in simulation studies is verified by experimental data presented.

The jet characteristics and variables just discussed were selected as being relevant to aerodynamic interference; other jet-vehicle interactions, such as heat transfer and acoustic fatigue, were not considered in this evaluation. Duplication of all these parameters simultaneously with cold gas is not possible. These parameters must be ranked in order of estimated overall importance and the most important variables simulated as well as possible. A detailed discussion of jet characteristics and variables and the effect of each on the jet plume is contained in reference 6. The following paragraph is a brief summary of the effect of the pertinent variables; for detailed information the references, particularly reference 6, should be consulted.

This discussion is made under the assumptions that the free-stream conditions are matched, $(\gamma_\infty, M_\infty)_{model} = (\gamma_\infty, M_\infty)_{flight}$, and that the specific heat ratio of the gases for the model and full-scale jets are not equal. It is desired that p_j/p_∞, $(\delta_j, \Delta\nu)$, $(\gamma M^2/\beta)_j$, exit momentum, and $(RT)_j$ be duplicated (the variables are listed here in an estimated order of importance). These variables are interdependent to some extent. (The ratio of jet-exit to free-stream static pressure affects a large number of the jet parameters.) Boundary shape, $(\delta_j, \Delta\nu)$, transmitted shock strength, mass flow, momentum, and thrust are all dependent on the value of p_j/p_∞. These parameters affect the plume-free-stream interaction in both the jet-exit region and in the jet-expansion region (sketch (a)). Assuming that the investigation is conducted with matched p_j/p_∞ and free-stream conditions, the exit momentum per unit area (proportional to $\gamma_j M_j{}^2$) and the parameter $(\gamma M^2/\beta)_j$ are the most influential variables relating to jet-expansion region aerodynamic interference. The exit momentum and $(\gamma M^2/\beta)_j$ affect the depth of penetration of the jet into the deflecting flow and influence the interaction several nozzle diameters from the nozzle exit in the jet direction. The initial jet-flow inclination angle δ_j is the initial angle of the plume, relative to the nozzle centerline, and is determined by Θ_N and $\Delta\nu$; $\Delta\nu$ in turn is determined by

p_j/p_∞ and γ. The initial plume angle δ_j must be matched between model and full scale in order to duplicate the jet-exit effects. Available data indicate that the value of $(RT)_j$ influences the rate of mixing between the plume and the free-stream flow and is thus concerned with the interference caused by the jet-downstream region.

The value of p_j/p_∞ can be duplicated by control of total pressure to the jet nozzle and thus does not affect the design of the jet nozzle for the model. The requirement that the parameter $(\gamma M^2/\beta)_j$ be duplicated dictated the exit Mach number and therefore the area ratio of the model nozzle. The requirement that δ_j be matched determines the value of θ_N. The geometry of the nozzle is determined by these variables and the size is fixed by the model-scale factor. The exit momentum per unit area is fixed once exit Mach number and p_j/p_∞ are specified (for a given gas). The value of the product $(RT)_j$ was not simulated for this investigation.

The value of the simulation parameters for model and full-scale conditions are compared in table 1. The estimated value of δ_j for model and full scale are compared as a function of p_j/p_∞ in figure 18. The slight difference shown is caused by the effect of γ on $\Delta\nu$ as a function of p_j/p_∞.

REFERENCES

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TABLE 1.- COMPARISON OF PARAMETER VALUES

Parameter	Full-scale value ($90\%\ H_2O_2$)	Simulation		
		Air	CO_2 (geometric simulation)	Air in CO_2 nozzle
A_e/A^*, [a]	9.4	4.526	9.4	9.4
M_j	3.435	3.07	3.47	3.85
γ_j	1.27	1.4	1.28	1.4
T_j, K	1013.9	288.9	288.9	288.9
$(RT)_j$	380,111	83,000	54,463	83,000
θ_N	18°	18°	18°	18°
$(\gamma M^2/\beta)_j$	4.55	4.55	4.63	5.59
$(\gamma M^2)_j$	14.94	13.19	15.41	20.75
p_r	0.265--5.0	0.13-11.0	0.13-4.0	0.5-3.5

[a]Assumes full-scale value of $p_c = 2.117 \times 10^6\ N/m^2$ (307 psia) and is constant.

TABLE 2.- INDEX TO DATA LISTINGS

Page	δ_u, deg	δ_l, deg	δ_r, deg	Span, L	Span, R	δ_t, deg	Nozzle	Gas
12	-20	35	0	0.925	0.025	0	1	Air
13								
14								
15								
16				.615	.615			
17								
18								
19								
20				.770	.770			
21				.770	.770			
22				.925	.925	15		
23				.925		15		
24				.615		0		
25				.615		15		
26				.770				
27				.615				
28			+5/-5					
29			-5					
30			-10					
31			-10					
32			-10					
33	-20/-10	25	0					
34	-10	25						
35		25				15/0		
36		15		.925				
37		15		.925				
38	-20	35		.615			2	CO_2
39				.615				
40				.615				
41				.925				
42				.925		0		
43				.615		15	1	Air
44							1	
45							1	
46							2	
47							2	

δ_u = -20° δ_l = 35° δ_r = 0 Span L = 0.925 Span R = 0.925 δ_t = 0 Nozzle no. 1 Gas Air

M= .614 R= 1.227

α	β	C_m	C_n	C_l	P_{r_L}	P_{r_R}	P_t
-4.39	.00	.0124	.0005	.0004			717.
-9.04	.00	.0173	.0006	.0007			707.
-.35	.00	.0080	.0003	.0011			718.
3.65	.00	.0043	.0002	.0014			709.
7.70	.00	.0009	-.0002	.0019			707.
11.72	.00	-.0024	-.0011	.0027			719.
15.78	.00	-.0053	-.0009	.0033			717.
18.53	.00	-.0053	-.0009	.0034			713.
-.36	.00	.0082	.0011	.0008			714.

M= .612 R= 1.211

α	β	C_m	C_n	C_l	P_{r_L}	P_{r_R}	P_t
-9.20	.00	.0159	-.0025	.0013	1.57		709.
-4.40	.00	.0109	-.0027	.0026	1.57		707.
-.37	.00	.0062	-.0027	.0026	1.57		709.
3.64	.00	.0023	-.0030	.0028	1.56		709.
7.68	.00	-.0008	-.0037	.0033	1.56		709.
11.72	.00	-.0046	-.0045	.0044	1.56		709.
15.76	.00	-.0073	-.0047	.0052	1.56		709.
18.53	.00	-.0076	-.0048	.0058	1.56		709.
-.37	.00	.0063	-.0025	.0025	1.56		709.

M= .606 R= 1.205

α	β	C_m	C_n	C_l	P_{r_L}	P_{r_R}	P_t
-9.19	.00	.0189	-.0025	.0031	1.57	1.51	709.
-4.39	.00	.0135	-.0028	.0035	1.55	1.51	709.
-.36	.00	.0084	-.0033	.0039	1.57	1.51	709.
3.66	.00	.0045	-.0036	.0042	1.57	1.52	709.
7.69	.00	.0015	-.0043	.0051	1.57	1.52	709.
11.70	.00	-.0024	-.0050	.0056	1.57	1.51	709.
15.77	.00	-.0053	-.0046	.0059	1.56	1.51	709.
18.59	.00	-.0057	-.0042	.0058	1.56	1.51	709.
-.37	.00	.0086	-.0033	.0037	1.57	1.51	709.

M= .608 R= 1.209

α	β	C_m	C_n	C_l	P_{r_L}	P_{r_R}	P_t
-9.06	.00	.0166	-.0012	.0021	.96	.91	709.
-4.37	.00	.0133	-.0013	.0023	.97	.91	709.
-.36	.00	.0085	-.0018	.0029	.97	.91	709.
3.65	.00	.0047	-.0022	.0032	.97	.91	709.
7.69	.00	.0018	-.0028	.0043	.97	.91	709.
11.72	.00	-.0020	-.0034	.0047	.97	.91	709.
15.74	.00	-.0046	-.0030	.0048	.97	.90	709.
18.58	.00	-.0053	-.0035	.0056	.97	.91	709.
-.37	.00	.0084	-.0019	.0030	.96	.90	712.

M= .608 R= 1.207

α	β	C_m	C_n	C_l	P_{r_L}	P_{r_R}	P_t
-9.04	.00	.018[illegible]	-.0005	.0020	.44	.48	710.
-4.36	.00	.0131	-.0009	.0024	.44	.47	713.
-.36	.00	.0084	-.0015	.0026	.44	.48	718.
3.65	.00	.0047	-.0014	.0028	.48	.48	717.
7.69	.00	.0016	-.0022	.0041	.44	.48	714.
11.73	.00	-.0020	-.0029	.0046	.48	.48	711.
15.77	.00	-.0049	-.0024	.0047	.48	.48	708.
18.52	.00	-.0051	-.0030	.0054	.48	.48	711.
-.36	.00	.0085	-.0013	.0027	.48	.48	717.

M= .610 R= 1.226

α	β	C_m	C_n	C_l	P_{r_L}	P_{r_R}	P_t
-.37	.00	.0086	-.0011	.0025	.48	.48	720.
-.37	.00	.0086	-.0019	.0033	.84	.84	720.
-.37	.00	.0087	-.0030	.0039	1.56	1.56	719.
-.37	.00	.0082	-.0058	.0054	2.82	2.82	716.
-.37	.00	.0077	-.0089	.0069	4.72	4.72	713.

M= .610 R= 2.167

α	β	C_m	C_n	C_l	P_{r_L}	P_{r_R}	P_t
-9.07	.00	.0160	.0005	.0005			1276.
-4.32	.00	.0132	.0007	.0007			1276.
-.32	.00	.0081	.0006	.0012			1276.
3.73	.00	.0043	.0002	.0015			1275.
7.81	.00	.0006	-.0002	.0023			1276.
11.87	.01	-.0031	-.0022	.0027			1276.
15.92	.01	-.0067	-.0011	.0034			1275.
18.76	.01	-.0077	-.0015	.0033			1276.
-.33	.00	.0082	.0010	.0012			1275.

M= .604 R= 2.151

α	β	C_m	C_n	C_l	P_{r_L}	P_{r_R}	P_t
-9.14	.00	.0192	-.0034	.0031	1.58	1.58	1275.
-4.38	.00	.0137	-.0031	.0033	1.58	1.58	1276.
-.33	.00	.0079	-.0037	.0038	1.58	1.59	1276.
3.73	.00	.0044	-.0042	.0045	1.58	1.58	1276.
7.79	.00	.0007	-.0045	.0049	1.58	1.58	1276.
11.86	.01	-.0036	-.0063	.0057	1.58	1.58	1276.
15.91	.01	-.0071	-.0051	.0056	1.58	1.58	1276.
18.76	.01	-.0082	-.0060	.0067	1.58	1.58	1276.
-.32	.00	.0090	-.0033	.0038	1.58	1.58	1276.

M= .607 R= 3.563

α	β	C_m	C_n	C_l	P_{r_L}	P_{r_R}	P_t
-9.10	.00	.0156	.0005	.0001			2125.
-4.35	.00	.0136	.0002	.0007			2126.
-.25	.00	.0079	.0005	.0011			2125.
3.66	.00	.0037	.0004	.0011			2124.
7.36	.01	.0005	-.0004	.0020			2124.
12.08	.01	-.0036	-.0018	.0025			2125.
15.17	.01	-.0073	.0001	.0026			2127.
-.24	.00	.0080	.0007	.0012			2124.

M= .610 R= 3.565

α	β	C_m	C_n	C_l	P_{r_L}	P_{r_R}	P_t
-9.13	.00	.0197	-.0030	.0030	1.58	1.58	2125.
-4.35	.00	.0139	-.0036	.0035	1.59	1.58	2125.
-.24	.01	.0078	-.0038	.0040	1.58	1.58	2126.
3.87	.01	.0038	-.0042	.0046	1.58	1.58	2125.
7.99	.01	.0006	-.0050	.0049	1.58	1.58	2126.
12.07	.01	-.0042	-.0063	.0052	1.58	1.58	2125.
16.19	.01	-.0078	-.0043	.0052	1.58	1.58	2125.
-.24	.00	.0078	-.0035	.0039	1.58	1.58	2126.

$\delta_u = -20°$ $\delta_l = 35°$ $\delta_r = 0$ Span L = 0.925 Span R = 0.925 $\delta_t = 0$ Nozzle no. 1 Gas Air

M= .798 R= 1.405

α	β	C_m	C_n	C_l	Pr_L	Pr_R	P_t
-8.92	.00	.0167	-.0002	.0009			709.
-4.11	.00	.0123	.0001	.0008			710.
-.05	.00	.0051	.0003	.0016			708.
3.97	.00	-.0003	.0012	.0015			709.
8.02	.00	-.0052	-.0003	.0023			712.
12.08	.00	-.0109	.0005	.0025			710.
16.15	.00	-.0121	.0017	.0022			708.
18.95	.00	-.0076	.0011	.0025			707.
-.07	.00	.0054	.0009	.0014			709.

M= .812 R= 1.420

α	β	C_m	C_n	C_l	Pr_L	Pr_R	P_t
-8.79	.00	.0159	-.0021	.0014	1.54		709.
-4.14	.00	.0114	-.0024	.0018	1.61		708.
-.08	.00	.0039	-.0032	.0026	1.64		709.
3.97	.00	-.0031	-.0023	.0024	1.62		707.
8.02	.00	-.0079	-.0038	.0034	1.64		706.
12.05	.00	-.0124	-.0036	.0039	1.62		710.
16.12	.00	-.0137	-.0036	.0039	1.63		708.
18.96	.01	-.0105	-.0042	.0044	1.63		708.
-.06	.00	.0029	-.0027	.0028	1.67		709.

M= .813 R= 1.420

α	β	C_m	C_n	C_l	Pr_L	Pr_R	P_t
-8.85	.00	.0187	-.0018	.0025	1.64	1.60	708.
-4.03	.00	.0131	-.0025	.0028	1.62	1.58	708.
-.09	.00	.0064	-.0030	.0037	1.62	1.58	707.
3.95	.00	.0004	-.0031	.0039	1.61	1.58	708.
8.02	.00	-.0059	-.0042	.0046	1.63	1.59	708.
12.07	.00	-.0115	-.0039	.0049	1.62	1.58	709.
16.13	.01	-.0111	-.0037	.0049	1.61	1.58	708.
19.17	.01	-.0086	-.0041	.0056	1.62	1.59	708.
-.08	.00	.0062	-.0029	.0038	1.62	1.59	709.

M= .803 R= 1.419

α	β	C_m	C_n	C_l	Pr_L	Pr_R	P_t
-8.83	.00	.0182	-.0007	.0017	.83	.80	709.
-4.12	.00	.0129	-.0009	.0019	.84	.79	709.
-.09	.00	.0064	-.0011	.0023	.82	.77	709.
3.97	.00	.0001	-.0012	.0026	.79	.78	708.
8.00	.00	-.0044	-.0028	.0036	.80	.77	709.
12.08	.00	-.0113	-.0015	.0033	.81	.76	709.
16.17	.01	-.0113	-.0015	.0037	.81	.76	709.
19.10	.01	-.0081	-.0014	.0037	.81	.76	709.
-.09	.00	.0058	-.0012	.0028	.81	.76	708.

M= .907 R= 1.461

α	β	C_m	C_n	C_l	Pr_L	Pr_R	P_t
-8.71	.00	.0138	.0014	.0002			703.
-3.96	.00	.0073	-.0013	.0012			702.
.13	.00	-.0063	-.0012	.0011			704.
4.16	.00	-.0096	.0008	.0011			702.
8.24	.00	-.0173	.0019	.0017			703.
12.30	.00	-.0241	.0016	.0019			702.
16.38	.01	-.0342	.0008	.0019			701.
19.21	.01	-.0206	.0011	.0023			706.
.16	.00	-.0042	-.0013	.0012			706.

M= .899 R= 1.461

α	β	C_m	C_n	C_l	Pr_L	Pr_R	P_t
-8.65	.00	.0153	.0008	.0007	2.91		703.
-3.94	.00	.0060	-.0025	.0014	2.91		703.
.14	.00	-.0080	-.0012	.0013	2.93		700.
4.16	.00	-.0085	-.0043	.0024	2.87		701.
8.24	.00	-.0164	-.0044	.0038	2.91		701.
12.31	.00	-.0278	-.0045	.0037	2.92		703.
16.35	.01	-.0293	-.0058	.0040	2.94		701.
19.22	.01	-.0414	-.0094	.0051	2.94		702.
.13	.00	-.0037	-.0041	.0018	2.94		702.

M= .895 R= 1.461

α	β	C_m	C_n	C_l	Pr_L	Pr_R	P_t
-8.64	.00	.0207	.0003	.0026	2.93	2.85	703.
-3.95	.00	.0093	-.0044	.0037	2.94	2.85	702.
.12	.00	-.0007	-.0056	.0037	2.94	2.88	702.
4.15	.00	-.0036	-.0064	.0044	2.91	2.86	702.
8.22	.00	-.0134	-.0062	.0054	2.89	2.85	702.
12.29	.01	-.0221	-.0069	.0056	2.91	2.85	703.
16.35	.01	-.0287	-.0086	.0058	2.91	2.85	703.
19.23	.01	-.0310	-.0109	.0062	2.92	2.86	701.
.11	.00	.0011	-.0070	.0039	2.89	2.85	703.

M= .898 R= 1.467

α	β	C_m	C_n	C_l	Pr_L	Pr_R	P_t
-8.66	-.00	.0169	.0026	.0011	1.35	1.36	704.
-3.90	.00	.0076	-.0025	.0025	1.36	1.36	703.
.09	.00	.0013	-.0053	.0029	1.35	1.35	702.
4.19	.00	-.0080	-.0023	.0027	1.37	1.37	702.
8.23	.00	-.0143	-.0023	.0035	1.36	1.35	702.
12.29	.00	-.0202	-.0035	.0040	1.34	1.34	702.
15.34	.01	-.0271	-.0033	.0037	1.36	1.36	702.
16.35	.01	-.0283	-.0036	.0036	1.36	1.35	701.
19.22	.01	-.0365	-.0056	.0043	1.36	1.34	704.
.15	.00	.0010	-.0048	.0027	1.35	1.34	702.

$\delta_u = -20°$ $\delta_l = 35°$ $\delta_r = 0$ Span L = 0.925 Span R = 0.925 $\delta_t = 0$ Nozzle no. 1 Gas Air

M= 1.100 R= 1.551

α	β	C_m	C_n	C_l	Pr_L	Pr_R	P_t
-8.53	-.00	.0179	.0027	-.0003			705.
-3.65	-.00	.0054	.0032	-.0003			717.
.42	-.00	-.0074	.0017	.0006			705.
4.47	.00	-.0183	.0011	.0013			718.
8.52	.00	-.0257	.0018	.0010			718.
12.59	.00	-.0308	.0009	.0012			703.
16.70	.00	-.0415	.0006	.0009			707.
19.53	.01	-.0508	.0010	.0010			709.
.39	-.00	-.0066	.0021	.0006			707.

M= 1.105 R= 1.565

α	β	C_m	C_n	C_l	Pr_L	Pr_R	P_t
-8.40	-.00	.0170	.0021	-.0001	1.81		712.
-3.65	-.00	.0048	.0019	.0002	1.82		710.
.42	-.00	-.0080	.0005	.0011	1.84		710.
4.46	.00	-.0198	-.0002	.0016	1.83		707.
8.53	.00	-.0271	.0003	.0016	1.81		709.
12.61	.00	-.0320	-.0005	.0017	1.81		709.
16.67	.00	-.0419	-.0009	.0015	1.80		709.
19.52	.01	-.0506	-.0001	.0014	1.79		707.
.41	-.00	-.0075	.0009	.0011	1.81		713.

M= 1.102 R= 1.518

α	β	C_m	C_n	C_l	Pr_L	Pr_R	P_t
-8.35	-.00	.0175	.0019	.0004	1.84	1.84	697.
-3.65	-.00	.0057	.0003	.0011	1.83	1.83	704.
.41	.00	-.0066	-.0019	.0023	1.81	1.81	709.
4.46	.00	-.0188	-.0024	.0026	1.82	1.82	706.
8.53	.00	-.0260	-.0020	.0024	1.82	1.82	704.
12.62	.00	-.0330	-.0021	.0022	1.82	1.82	711.
16.68	.01	-.0413	-.0025	.0027	1.81	1.81	708.
19.52	.01	-.0499	-.0011	.0026	1.81	1.81	704.
.41	.00	-.0069	-.0017	.0024	1.82	1.82	711.

M= 1.102 R= 1.524

α	β	C_m	C_n	C_l	Pr_L	Pr_R	P_t
-8.33	-.00	.0166	.0009	.0005	3.83		708.
-3.64	-.00	.0044	.0002	.0009	3.84		709.
.41	.00	-.0087	-.0017	.0019	3.86		710.
4.48	.00	-.0206	-.0027	.0027	3.83		712.
8.54	.00	-.0283	-.0019	.0024	3.79		716.
12.60	.00	-.0322	-.0028	.0025	3.77		710.
16.66	.01	-.0419	-.0032	.0026	3.64		718.
19.52	.01	-.0516	-.0029	.0027	3.62		709.
.42	.00	-.0083	-.0017	.0020	3.85		709.

M= 1.099 R= 1.532

α	β	C_m	C_n	C_l	Pr_L	Pr_R	P_t
-8.32	-.00	.0177	.0010	.0010	3.82	3.82	707.
-3.64	-.00	.0050	-.0020	.0023	3.84	3.84	714.
.44	.00	-.0084	-.0049	.0036	3.92	3.92	708.
4.45	.00	-.0188	-.0046	.0037	3.83	3.83	705.
8.53	.00	-.0264	-.0044	.0036	3.80	3.80	708.
12.60	.00	-.0313	-.0045	.0033	3.77	3.77	707.
16.67	.01	-.0418	-.0046	.0035	3.80	3.80	705.
19.54	.01	-.0507	-.0033	.0032	3.75	3.75	707.
.41	.00	-.0065	-.0051	.0037	3.87	3.87	702.

M= 1.113 R= 1.553

α	β	C_m	C_n	C_l	Pr_L	Pr_R	P_t
.41	.00	-.0072	.0017	.0012			704.
.42	.00	-.0078	-.0009	.0025	1.84	1.84	714.
.42	.00	-.0078	-.0043	.0039	3.88	3.88	712.
.42	.00	-.0074	-.0092	.0057	6.98	6.98	710.
.41	.00	-.0069	-.0133	.0071	11.60	11.60	707.

M= 1.101 R= 2.771

α	β	C_m	C_n	C_l	Pr_L	Pr_R	P_t
-8.51	-.00	.0185	.0034	-.0006			
-3.57	-.00	.0046	.0026	-.0001			1273.
.50	-.00	-.0088	.0013	.0006			1272.
4.62	.00	-.0186	.0010	.0010			1272.
8.77	.00	-.0287	.0011	.0010			1273.
12.92	.01	-.0336	.0003	.0010			1273.
17.09	.01	-.0423	.0001	.0010			1273.
19.95	.01	-.0525	.0005	.0010			1274.
.52	-.00	-.0074	.0019	.0005			1273.
							1273.

M= 1.101 R= 2.759

α	β	C_m	C_n	C_l	Pr_L	Pr_R	P_t
-8.34	-.00	.0181	.0013	.0006	3.83	3.83	1273.
-3.61	-.00	.0052	-.0018	.0020	3.83	3.83	1275.
.47	.00	-.0060	-.0045	.0032	3.72	3.72	1273.
4.62	.00	-.0196	-.0041	.0033	3.82	3.82	1272.
8.77	.00	-.0280	-.0040	.0032	3.82	3.82	1272.
12.89	.01	-.0338	-.0041	.0027	3.91	3.81	1273.
17.08	.01	-.0432	-.0040	.0025	3.82	3.82	1272.
19.98	.01	-.0533	-.0028	.0024	3.83	3.83	1273.
.50	.00	-.0067	-.0045	.0033	3.82	3.82	1272.

M= 1.097 R= 4.486

α	β	C_m	C_n	C_l	Pr_L	Pr_R	P_t
-8.40	-.00	.0187	.0041	-.0008			2122.
-3.55	-.01	.0056	.0030	-.0003			2124.
.56	-.00	-.0088	.0012	.0007			2123.
4.93	.00	-.0200	.0005	.0012			2120.
9.13	.00	-.0275	.0011	.0010			2122.
13.40	.01	-.0346	.0003	.0010			2122.
17.67	.01	-.0440	-.0007	.0012			2122.
20.20	.02	-.0536	-.0000	.0011			2121.
.68	-.00	-.0081	.0014	.0008			2122.

M= 1.096 R= 4.443

α	β	C_m	C_n	C_l	Pr_L	Pr_R	P_t
-8.41	-.01	.0187	.0015	.0009	3.81	3.81	2121.
-3.52	-.00	.0055	-.0023	.0023	3.81	3.81	2120.
.68	.00	-.0078	-.0043	.0032	3.84	3.84	2120.
4.91	.00	-.0213	-.0042	.0031	3.88	3.88	2122.
9.14	.01	-.0283	-.0039	.0030	3.80	3.80	2123.
13.36	.01	-.0346	-.0043	.0026	3.80	3.80	2122.
17.66	.02	-.0451	-.0049	.0030	3.82	3.82	2120.
20.21	.02	-.0542	-.0035	.0026	3.81	3.81	2122.
.66	-.00	-.0081	-.0042	.0033	3.84	3.84	2122.

δ_u = -20° δ_l = 35° δ_r = 0   Span L = 0.925   Span R = 0.925 δ_t = 0   Nozzle no. 1   Gas   Air

M= 1.297   R= 1.545

α	β	C_m	C_n	C_l	P_{r_L}	P_{r_R}	P_t
-8.59	.00	.0202	.0009	.0003			
-3.91	.00	.0120	.0016	.0003			709.
.16	.00	.0038	.0016	.0008			707.
4.21	.00	-.0047	.0016	.0012			707.
8.29	.00	-.0129	.0022	.0013			707.
12.38	.00	-.0225	.0023	.0014			707.
16.47	.01	-.0353	.0019	.0014			708.
19.31	.01	-.0453	.0014	.0013			707.
.18	.00	.0040	.0018	.0008			707.
							707.

M= 1.299   R= 1.544

α	β	C_m	C_n	C_l	P_{r_L}	P_{r_R}	P_t
-8.81	.00	.0201	-.0004	.0007	4.39		707.
-3.92	.00	.0111	-.0000	.0010	4.44		708.
.13	.00	.0029	.0000	.0016	4.42		706.
4.20	.00	-.0061	-.0004	.0020	4.40		708.
8.30	.00	-.0142	.0001	.0021	4.30		709.
12.38	.00	-.0239	.0002	.0020	4.34		708.
16.46	.01	-.0364	-.0000	.0019	4.33		708.
19.32	.01	-.0460	-.0008	.0021	4.35		708.
.17	.00	.0029	.0001	.0016	4.35		709.

M= 1.299   k= 1.543

α	β	C_m	C_n	C_l	P_{r_L}	P_{r_R}	P_t
-9.66	.00	.0200	-.0004	.0010	4.40	4.23	707.
-3.91	.00	.0112	-.0004	.0012	4.37	4.22	707.
.14	.00	.0029	-.0004	.0018	4.25	4.23	707.
4.21	.00	-.0060	-.0012	.0023	4.38	4.22	707.
8.27	.00	-.0139	-.0009	.0026	4.38	4.22	707.
12.36	.00	-.0236	-.0008	.0024	4.40	4.20	707.
16.42	.01	-.0358	-.0004	.0025	4.37	4.21	709.
19.33	.01	-.0458	-.0002	.0024	4.37	4.22	707.
.14	.00	.0032	-.0005	.0018	4.35	4.20	708.

M= 1.298   k= 1.544

α	β	C_m	C_n	C_l	P_{r_L}	P_{r_R}	P_t
-8.63	.00	.0203	.0004	.0007	2.60	2.51	707.
-3.91	.00	.0116	.0003	.0009	2.59	2.51	707.
.15	.00	.0033	.0004	.0015	2.52	2.50	707.
4.21	.00	-.0054	.0000	.0018	2.58	2.51	707.
8.29	.00	-.0135	.0001	.0021	2.60	2.50	707.
12.38	.00	-.0230	.0006	.0020	2.59	2.49	707.
16.45	.01	-.0355	.0004	.0022	2.57	2.49	708.
19.32	.01	-.0456	.0006	.0023	2.58	2.49	708.
.15	.00	.0032	.0007	.0014	2.59	2.50	707.

M= 1.711   k= 1.414

α	β	C_m	C_n	C_l	P_{r_L}	P_{r_R}	P_t
-4.07	.00	.0107	.0002	-.0000			702.
-.05	.00	.0030	.0011	.0000			704.
3.99	.00	-.0046	.0019	.0001			704.
8.06	.00	-.0134	.0022	.0001			704.
12.13	.00	-.0229	.0021	.0007			703.
16.17	.00	-.0339	.0020	.0005			704.
19.05	.00	-.0433	.0017	.0007			708.
-.05	.00	.0032	.0016	-.0000			702.

M= 1.699   k= 1.428

α	β	C_m	C_n	C_l	P_{r_L}	P_{r_R}	P_t
-8.87	.00	.0208	-.0002	-.0000	3.64		711.
-4.09	.00	.0107	.0003	.0001	3.60		709.
-.04	.00	.0025	.0005	.0003	3.70		707.
3.99	.00	-.0053	.0011	.0004	3.70		707.
8.06	.00	-.0143	.0012	.0005	3.66		707.
12.13	.00	-.0234	.0011	.0006	3.69		707.
16.18	.00	-.0348	.0006	.0008	3.67		707.
19.04	.01	-.0438	.0006	.0011	3.69		707.
-.00	.00	.0027	.0009	.0003	3.68		707.

M= 1.696   k= 1.416

α	β	C_m	C_n	C_l	P_{r_L}	P_{r_R}	P_t
-8.87	.00	.0206	-.0002	-.0000	3.64	3.36	707.
-4.10	.00	.0104	.0001	.0001	3.72	3.38	707.
-.04	.00	.0025	.0007	.0004	3.60	3.40	707.
4.01	.00	-.0055	.0012	.0004	3.57	3.38	707.
8.05	.00	-.0142	.0008	.00[illegible]	3.63	3.38	708.
12.09	.00	-.0235	.0006	.0008	3.68	3.38	707.
16.20	.00	-.0348	.0008	.0011	3.62	3.36	708.
19.01	.01	-.0438	.0005	.0013	3.80	3.37	707.
-.05	.00	.0026	.0011	.0004	3.65	3.39	707.

M= 1.700   k= 1.410

α	β	C_m	C_n	C_l	P_{r_L}	P_{r_R}	P_t
-8.83	.00	.0200	-.0006	.0001	5.14	4.84	708.
-4.10	.00	.0103	-.0001	.0003	5.05	4.86	707.
-.05	.00	.0025	.0004	.0006	5.20	4.88	707.
4.01	.00	-.0055	.0004	.0009	5.04	4.85	707.
8.06	.00	-.0145	.0005	.0009	5.14	4.85	707.
12.13	.00	-.0239	.0005	.0012	5.11	4.86	708.
16.18	.01	-.0351	.0005	.0013	5.15	4.84	707.
19.02	.01	-.0440	.0005	.0016	5.14	4.85	707.
-.04	.00	.0026	.0009	.0006	5.16	4.87	707.

$\delta_u = -20°$ $\delta_l = 35°$ $\delta_r = 0$ Span L = 0.615 Span R = 0.615 $\delta_t = 0$ Nozzle no. 1 Gas Air

α	β	C_m	C_n	C_l	Pr_L	Pr_R	P_t
M= .592				K= 1.187			
-8.97	.00	.0170	.0002	.0028			701.
-4.39	.00	.0123	.0003	.0012			703.
-.39	.00	.0074	-.0000	.0019			702.
3.63	.00	.0043	-.0001	.0019			702.
7.66	.00	.0011	-.0007	.0030			702.
11.69	.00	-.0022	-.0013	.0036			701.
15.73	.00	-.0050	-.0012	.0040			702.
18.52	.00	-.0056	-.0014	.0044			700.
-.40	.00	.0079	-.0000	.0014			702.
M= .593				K= 1.192			
-9.11	.00	.0146	-.0005	.0017	1.56		702.
-4.38	.00	.0097	-.0005	.0020	1.56		702.
-.39	.00	.0068	-.0010	.0027	1.54		702.
3.63	.00	.0010	-.0013	.0028	1.53		701.
7.69	.00	-.0017	-.0020	.0035	1.53		702.
11.64	.00	-.0051	-.0024	.0041	1.54		702.
15.72	.00	-.0073	-.0030	.0053	1.54		702.
18.56	.00	-.0085	-.0026	.0056	1.54		702.
-.41	.00	.0064	-.0008	.0025	1.57		702.
M= .593				K= 1.193			
-9.13	.00	.0241	-.0031	.0058	1.57	1.50	702.
-4.42	.00	[illegible]	-.0027	.0058	1.5[illegible]	1.51	702.
-.40	.00	.0149	-.0034	.0068	1.54	1.51	702.
3.62	.00	.0103	-.0041	.0073	1.54	1.51	701.
7.66	.00	.0085	-.0039	.0082	1.54	1.51	701.
11.65	.00	.0059	-.0041	.0089	1.54	1.51	701.
15.73	.00	.0031	-.0061	.0094	1.54	1.51	702.
18.53	.00	.0027	-.0065	.0123	1.54	1.51	702.
-.40	.00	.0149	-.0032	.0067	1.54	1.52	702.
M= .593				K= 1.196			
-8.95	.00	.0202	-.0011	.0035	.54	.56	702.
-4.38	.00	.0157	-.0009	.0035	.56	.52	701.
-.37	.00	.0113	-.0011	.0041	.57	.52	700.
3.63	.00	.0077	-.0015	.0041	.57	.53	701.
7.68	.00	.0048	-.0021	.0053	.57	.53	702.
11.71	.00	.0014	-.0023	.0054	.57	.53	701.
15.70	.00	-.0014	-.0022	.0060	.57	.53	701.
18.52	.00	-.0020	-.0028	.0071	.57	.53	703.
-.39	.00	.0114	-.0009	.0039	.57	.53	701.

α	β	C_m	C_n	C_l	Pr_L	Pr_R	P_t
M= .807				K= 1.442			
-8.77	.00	.0163	-.0006	.0008			707.
-4.12	.00	.0119	-.0003	.0009			706.
-.08	.00	.0050	-.0001	.0015			708.
3.98	.00	-.0016	.0006	.0014			710.
8.02	.00	-.0066	-.0004	.0022			708.
12.09	.00	-.0122	.0001	.0023			708.
16.12	.00	-.0126	.0005	.0023			708.
19.16	.01	-.0085	.0011	.0023			709.
-.08	.00	.0051	.0001	.0017			708.
M= .804				K= 1.445			
-8.69	.00	.0151	-.0009	.0010	1.62		709.
-4.11	.00	.0100	-.0002	.0011	1.63		710.
-.05	.00	.0029	-.0004	.0019	1.63		710.
3.98	.00	-.0013	.0001	.0016	1.63		710.
8.02	.00	-.0083	-.0010	.0024	1.62		711.
12.08	.00	-.0139	-.0008	.0029	1.63		709.
16.13	.01	-.0140	-.0001	.0029	1.63		709.
19.16	.01	-.0105	.0003	.0028	1.63		709.
-.08	.00	.0032	-.0003	.0021	1.64		709.
M= .802				K= 1.441			
-8.42	.00	.0230	-.0020	.0041	1.61	1.56	709.
-4.12	.00	.0179	-.0024	.0043	1.63	1.55	710.
-.08	.00	.0113	-.0020	.0052	1.63	1.55	709.
3.96	.00	.0050	-.0018	.0053	1.63	1.55	709.
8.04	.00	.0002	-.0023	.0058	1.62	1.55	709.
12.08	.00	-.0057	-.0017	.0059	1.63	1.55	709.
16.14	.01	-.0048	-.0013	.0060	1.63	1.55	709.
19.13	.01	-.0026	-.0008	.0056	1.63	1.55	708.
-.09	.00	.0117	-.0015	.0051	1.63	1.55	709.
M= .896				K= 1.500			
-8.62	-.00	.0148	-.0008	.0001			700.
-3.92	-.00	.0067	-.0029	.0009			703.
.11	-.00	-.0016	-.0040	.0010			701.
4.17	.00	-.0107	.0007	.0007			703.
8.25	.00	-.0159	.0013	.0014			702.
12.24	.00	-.0235	.0010	.0016			702.
16.37	.00	-.0313	.0008	.0014			701.
19.40	.01	-.0416	.0004	.0018			703.
.13	.00	-.0033	-.0019	.0010			700.
M= .903				K= 1.510			
-8.72	.00	.0115	-.0017	.0009	2.92		704.
-3.93	.00	.0020	-.0030	.0012	2.93		702.
.15	.00	-.0090	-.0025	.0012	2.97		702.
4.16	.00	-.0106	-.0007	.0010	2.93		701.
8.24	.00	-.0200	.0003	.0018	2.93		703.
12.24	.00	-.0250	-.0008	.0025	2.92		702.
16.36	.01	-.0332	-.0012	.0022	2.92		701.
19.19	.01	-.0378	-.0029	.0031	2.90		702.
.16	.00	-.0047	-.0025	.0010	2.92		702.
M= .900				K= 1.504			
-8.61	.00	.0176	-.0021	.0026	2.92	2.80	703.
-3.94	.00	.0091	-.0036	.0029	2.93	2.82	702.
.10	.00	.0032	-.0047	.0032	2.92	2.82	701.
4.16	.00	-.0028	-.0033	.0037	2.92	2.82	704.
8.24	.00	-.0127	-.0024	.0044	2.93	2.83	702.
12.25	.00	-.0210	-.0032	.0046	2.93	2.82	700.
16.34	.01	-.0270	-.0030	.0040	2.91	2.81	702.
19.20	.01	-.0344	-.0049	.0044	2.90	2.80	705.
.14	.00	.0028	-.0044	.0030	2.93	2.83	704.

δ_u = -20° δ_L = 35° δ_R = 0 Span L = 0.615 Span R = 0.615 δ_t = 0 Nozzle no. 1 Gas Air

M= 1.10[illegible] K= 1.56[illegible]

α	β	C_m	C_n	C_l	Pr_L	Pr_R	P_t
-8.32	.00	.0173	.0025	.0005			707.
-3.65	.00	.0055	.0027	.0009			707.
.47	.00	-.0041	.0015	.0013			706.
4.46	.00	-.0145	.0004	.0026			707.
8.54	.00	-.0254	.0015	.0024			708.
12.61	.00	-.0329	.0007	.0023			710.
16.69	.01	-.0420	.0000	.0026			708.
19.55	.01	-.0509	.0005	.0026			710.
.40	.00	-.0063	.0019	.0020			706.

M= 1.106 K= 1.595

α	β	C_m	C_n	C_l	Pr_L	Pr_R	P_t
-8.36	-.00	.0142	.0018	.0003	3.37		709.
-3.65	-.00	.0030	.0014	.0010	3.37		704.
.43	.00	-.0093	.0002	.0017	3.96		704.
4.46	.00	-.0200	.0001	.0020	3.35		703.
8.54	.00	-.0275	.0009	.0018	3.34		705.
12.61	.00	-.0322	.0008	.0016	3.53		707.
16.69	.01	-.0422	.0005	.0019	3.35		709.
19.58	.01	-.0515	.0012	.0020	3.34		708.
.41	.00	-.0041	.0006	.0019	3.33		707.

M= 1.103 K= 1.581

α	β	C_m	C_n	C_l	Pr_L	Pr_R	P_t
-8.50	-.00	.0164	.0016	.0006	3.33	3.81	707.
-3.62	.00	.0043	.0009	.0015	3.33	3.82	708.
.39	.00	-.0083	-.0011	.0028	3.35	3.83	706.
4.46	.00	-.0202	-.0001	.0025	3.36	3.85	708.
8.53	.00	-.0280	.0007	.0019	3.33	3.82	707.
12.61	.00	-.0336	.0003	.0015	3.32	3.80	707.
16.69	.01	-.0416	.0003	.0016	3.34	3.73	709.
19.55	.01	-.0518	.0011	.0017	3.33	3.78	709.
.42	.00	-.0086	-.0008	.0024	3.34	3.82	710.

M= 1.107 K= 1.583

α	β	C_m	C_n	C_l	Pr_L	Pr_R	P_t
-8.36	-.00	.0170	.0027	-.0002			703.
-3.63	-.00	.0056	.0025	-.0000			707.
.39	.00	-.0072	.0014	.0008			709.
4.47	.00	-.0149	.0009	.0014			706.
8.53	.00	-.0261	.0013	.0014			709.
12.61	.00	-.0316	.0006	.0012			705.
16.68	.01	-.0419	-.0001	.0014			707.
19.53	.01	-.0506	.0005	.0012			709.
.46	.00	-.0071	.0016	.0009			708.

M= 1.402 K= 1.675

α	β	C_m	C_n	C_l	Pr_L	Pr_R	P_t
-8.64	.00	.0263	.0004	.0002			712.
-3.93	.00	.0117	.0016	.0002			710.
.15	.00	.0034	.0017	.0004			709.
4.20	.00	-.0066	.0014	.0011			708.
8.29	.00	-.0131	.0020	.0012			707.
12.37	.00	-.0226	.0018	.0013			709.
16.41	.01	-.0354	.0013	.0014			709.
19.36	.01	-.0450	.0007	.0013			710.
.14	.00	.0034	.0020	.0008			712.

M= 1.299 K= 1.674

α	β	C_m	C_n	C_l	Pr_L	Pr_R	P_t
-8.81	.00	.0164	.0006	.0007	4.40		711.
-3.88	.00	.0097	.0005	.0011	4.42		708.
.14	.00	.0020	.0010	.0012	4.45		706.
4.20	.00	-.0059	.0014	.0016	4.42		708.
8.28	.00	-.0146	.0020	.0017	4.41		709.
12.36	.00	-.0232	.0023	.0016	4.41		709.
16.45	.01	-.0357	.0022	.0019	4.42		707.
19.31	.01	-.0454	.0017	.0018	4.42		705.
.14	.00	.0021	.0012	.0015	4.42		707.

M= 1.302 K= 1.565

α	β	C_m	C_n	C_l	Pr_L	Pr_R	P_t
-8.71	.00	.0178	.0004	.0005	4.42	4.24	707.
-3.91	.00	.0043	.0005	.0012	4.42	4.24	707.
.14	.00	.0016	.0009	.0014	4.41	4.24	707.
4.23	.00	-.0064	.0014	.0015	4.41	4.24	707.
8.29	.00	-.0145	.0019	.0016	4.4	4.23	708.
12.35	.01	-.0247	.0023	.0018	4.42	4.25	707.
16.43	.01	-.0366	.0022	.0016	4.41	4.24	707.
19.35	.01	-.0469	.0024	.0015	4.43	4.25	707.
.20	.00	.0017	.0013	.0016	4.42	4.24	707.

M= 1.708 K= 1.453

α	β	C_m	C_n	C_l	Pr_L	Pr_R	P_t
-8.80	.00	.0198	-.0001	-.0003			709.
-4.10	.00	.0106	.0001	-.0001			709.
-.07	.00	.0029	.0004	.0001			716.
4.01	.00	-.0051	.0014	.0001			712.
8.06	.00	-.0137	.0014	.0003			709.
12.12	.00	-.0228	.0017	.0003			709.
16.18	.00	-.0342	.0015	.0004			709.
19.04	.00	-.0435	.0016	.0035			709.
-.06	.00	.0030	.0008	.0001			712.

M= 1.708 K= 1.434

α	β	C_m	C_n	C_l	Pr_L	Pr_R	P_t
-8.03	.00	.0187	-.0004	-.0001	5.14		703.
-4.10	.00	.0046	-.0003	.0005	5.26		709.
-.05	.00	.0023	.0003	.0004	5.26		709.
3.99	.00	-.0055	.0010	.0004	5.26		710.
8.07	.00	-.0142	.0014	.0005	5.24		711.
12.12	.00	-.0235	.0014	.0006	5.22		712.
16.18	.00	-.0365	.0018	.0008	5.22		712.
19.01	.00	-.0437	.0019	.0008	5.23		712.
-.01	.00	.0023	.0004	.0004	5.27		711.

M= 1.710 K= 1.442

α	β	C_m	C_n	C_l	Pr_L	Pr_R	P_t
-8.82	.00	.0181	-.0006	-.0003	5.20		714.
-4.07	.00	.0089	-.0006	.0001	5.20	4.81	712.
-.06	.00	.0017	.0003	.0001	5.24	4.81	710.
4.00	.00	-.0066	.0011	.0001	5.22	4.83	710.
8.09	.00	-.0150	.0014	.0003	5.24	4.83	709.
12.10	.00	-.0260	.0016	.0002	5.24	4.86	709.
16.16	.00	-.0351	.0019	.0005	5.25	4.84	709.
19.03	.00	-.0442	.0019	.0007	5.21	4.91	709.
-.05	.00	.0017	.0006	.0001	5.22	4.90	709.
						4.96	

δ_u = -20° δ_l = 35° δ_r = 0 Span L = 0.615 Span R = 0.615 δ_t = 0 Nozzle no. 1 Gas Air

α	β	C_m	C_n	C_l	Pr_L	Pr_R	P_t
	M= .608			R= 1.233			
-9.00	.00	.0173	.0017	.0008			708.
-4.39	.00	.0126	.0015	.0011			709.
-.39	.00	.0080	.0013	.0015			709.
3.64	.00	.0043	.0008	.0020			709.
7.68	.00	.0013	.0006	.0024			709.
11.72	.00	-.0024	-.0004	.0032			709.
15.74	.00	-.0051	.0002	.0035			708.
18.55	.00	-.0055	-.0002	.0042			708.
-.37	.00	.0041	.0012	.0016			709.
	M= .609			R= 1.234			
-9.02	.00	.0156	-.0005	.0018	1.53		709.
-4.39	.00	.0107	-.0004	.0021	1.53		708.
-.36	.00	.0061	-.0006	.0027	1.54		709.
3.64	.00	.0022	-.0012	.0031	1.53		708.
7.68	.00	-.0009	-.0015	.0036	1.54		709.
11.72	.00	-.0047	-.0023	.0045	1.54		709.
15.77	.00	-.0072	-.0018	.0044	1.54		709.
18.58	.00	-.0076	-.0024	.0054	1.53		708.
-.33	.00	.0058	-.0006	.0025	1.53		709.
	M= .609			R= 1.234			
-9.10	.00	.0220	-.0016	.0051	1.54	1.52	709.
-4.40	.00	.0167	-.0019	.0054	1.58	1.51	709.
-.37	.00	.0119	-.0022	.0060	1.54	1.51	709.
3.64	.00	.0077	-.0024	.0063	1.58	1.51	708.
7.69	.00	.0042	-.0025	.0068	1.58	1.51	709.
11.73	.00	.0004	-.0026	.0067	1.58	1.51	709.
15.76	.00	-.0024	-.0030	.0071	1.58	1.51	709.
18.59	.00	-.0028	-.0034	.0077	1.58	1.51	709.
-.35	.00	.0119	-.0022	.0057	1.53	1.52	708.
	M= .802			R= 1.454			
-8.78	.00	.0163	.0005	.0008			708.
-4.12	.00	.0123	.0006	.0008			707.
-.08	.00	.0049	.0006	.0014			708.
3.98	.00	-.0015	.0016	.0012			710.
8.01	.00	-.0061	.0005	.0020			708.
12.04	.00	-.0129	.0008	.0023			708.
16.13	.00	-.0123	.0015	.0023			708.
18.98	.01	-.0084	.0017	.0023			708.
-.03	.00	.0047	.0006	.0018			708.
	M= .805			R= 1.456			
-8.79	.00	.0158	-.0009	.0014	1.63		708.
-4.12	.00	.0108	-.0009	.0017	1.64		708.
-.08	.00	.0039	-.0015	.0027	1.64		707.
3.96	.00	-.0024	-.0005	.0022	1.64		708.
8.02	.00	-.0081	-.0021	.0035	1.64		707.
12.07	.00	-.0147	-.0015	.0034	1.63		710.
16.13	.00	-.0139	-.0006	.0031	1.64		709.
18.99	.01	-.0100	-.0007	.0034	1.64		708.
-.04	.00	.0032	-.0012	.0025	1.63		710.
	M= .805			R= 1.456			
-8.79	.00	.0213	-.0008	.0036	1.61	1.54	708.
-4.13	.00	.0164	-.0017	.0043	1.63	1.55	707.
-.08	.00	.0089	-.0020	.0051	1.63	1.55	708.
3.95	.00	.0026	-.0017	.0049	1.63	1.54	708.
8.01	.00	-.0034	-.0029	.0058	1.63	1.55	707.
12.07	.00	-.0102	-.0019	.0053	1.63	1.55	707.
16.12	.01	-.0105	-.0014	.0050	1.63	1.55	708.
18.98	.01	-.0075	-.0010	.0049	1.63	1.55	707.
-.05	.00	.0087	-.0016	.0051	1.63	1.55	710.

α	β	C_m	C_n	C_l	Pr_L	Pr_R	P_t
	M= .904			R= 1.528			
-8.66	.00	.0131	.0014	-.0000			701.
-3.93	.00	.0053	-.0011	.0009			701.
.12	.00	-.0027	-.0015	.0009			700.
4.15	.00	-.0094	.0003	.0006			702.
8.22	.00	-.0149	.0016	.0014			701.
12.21	.00	-.0240	.0016	.0014			702.
16.34	.01	-.0311	.0012	.0012			702.
19.19	.01	-.0345	-.0003	.0021			702.
.12	.00	-.0026	-.0013	.0009			702.
	M= .903			R= 1.525			
-8.65	.00	.0140	.0005	.0005	2.93		703.
-3.93	.00	.0050	-.0016	.0010	2.94		702.
.11	.00	-.0018	-.0024	.0013	2.93		702.
4.16	.00	-.0123	-.0004	.0013	2.94		702.
8.24	.00	-.0189	-.0017	.0028	2.95		703.
12.29	.00	-.0267	-.0040	.0035	2.95		702.
16.36	.01	-.0299	-.0039	.0036	2.95		702.
19.23	.01	-.0368	-.0056	.0043	2.95		703.
.12	.00	-.0049	-.0018	.0011	2.95		702.
	M= .900			R= 1.520			
-8.65	.00	.0195	.0004	.0021	2.93	2.62	703.
-3.95	.00	.0109	-.0029	.0031	2.91	2.81	702.
.11	.00	.0014	-.0046	.0031	2.92	2.82	701.
4.16	.00	-.0081	-.0036	.0037	2.93	2.83	703.
8.24	.00	-.0136	-.0040	.0046	2.92	2.82	702.
12.29	.00	-.0229	-.0051	.0049	2.92	2.82	702.
16.36	.01	-.0301	-.0059	.0047	2.93	2.83	702.
19.21	.01	-.0374	-.0074	.0050	2.93	2.83	702.
.13	.00	.0006	-.0046	.0033	2.92	2.82	701.

$\delta_u = -20°$ $\delta_l = 35°$ $\delta_r = 0$ Span L = 0.615 Span R = 0.615 $\delta_t = 0$ Nozzle no. 1 Gas Air

M= 1.0?? R= 1.51?

α	β	C_m	C_n	C_l	Pr_L	Pr_R	P_t
-8.57	.00	.01?6	.0024	-.0022			6?4.
-3.64	.00	.0062	.0024	.0014			6?6.
.41	.00	-.0058	.0012	.0012			625.
4.43	.00	-.0172	.0007	.0013			6?8.
8.52	.00	-.0263	.0015	.0016			637.
12.57	.00	-.0367	.0006	.0016			657.
16.62	.01	-.0369	.0003	.0017			655.
19.51	.01	-.0465	.0004	.0015			646.
.39	.00	-.0084	.0017	.0012			643.

M= 1.063 R= 1.527

α	β	C_m	C_n	C_l	Pr_L	Pr_R	P_t
-8.37	.00	.0169	.0012	.0007	3.35		697.
-3.69	.00	.0045	.0007	.0015	3.32		695.
.37	.00	-.0073	-.0006	.0022	3.31		695.
4.42	.00	-.0145	-.0014	.0024	3.41		697.
8.49	.00	-.0265	-.0011	.0027	3.33		686.
12.55	.00	-.0323	-.0023	.0027	3.31		695.
16.61	.01	-.0423	-.0024	.0023	3.33		697.
19.57	.01	-.0517	-.0015	.0028	3.32		687.
.41	.00	-.0096	-.0004	.0023	4.10		684.

M= 1.103 R= 1.545

α	β	C_m	C_n	C_l	Pr_L	Pr_R	P_t
-8.53	-.00	.0163	.0014	.0036	3.??	3.46	7??.
-3.65	.00	.0036	.0002	.0014	3.36	3.36	707.
.40	.00	-.0086	-.0016	.0025	3.35	3.57	703.
4.46	.00	-.0206	-.0019	.0026	3.37	3.58	707.
8.51	.00	-.0286	-.0021	.0026	3.34	3.36	706.
12.60	.00	-.0347	-.0023	.0027	3.36	3.56	708.
16.69	.01	-.0439	-.0030	.0031	3.37	3.68	710.
19.71	.01	-.0531	-.0018	.0041	3.34	3.85	707.
.40	.00	-.0075	-.0015	.0029	3.3?	3.50	705.

M= 1.301 R= 1.602

α	β	C_m	C_n	C_l	Pr_L	Pr_R	P_t
-8.65	.00	.0149	.0004	.0008			709.
-3.61	.00	.0115	.0013	.0004			709.
.14	.00	.0032	.0014	.0013			708.
4.?0	.00	-.0054	.0013	.0016			708.
8.28	.00	-.0131	.0019	.0018			706.
12.37	.01	-.0225	.0021	.0020			709.
16.43	.01	-.0356	.0015	.0021			707.
19.42	.01	-.0462	.0015	.0016			707.
.15	.00	.0035	.0016	.0012			705.

M= 1.299 R= 1.557

α	β	C_m	C_n	C_l	Pr_L	Pr_R	P_t
-8.62	.00	.0143	-.0007	.0015	4.43		707.
-3.69	.00	.0045	-.0003	.0017	4.44		707.
.14	.00	.0015	-.0002	.0022	4.45		706.
4.20	.00	-.0066	-.0002	.0023	4.45		708.
8.30	.00	-.0145	-.0001	.0024	4.47		707.
12.37	.01	-.0241	.0001	.0025	4.45		707.
16.44	.01	-.0363	.0001	.0025	4.43		707.
19.32	.01	-.0472	-.0002	.0024	4.44		707.
.15	.00	.0015	.0001	.0021	4.45		707.

M= 1.297 R= 1.584

α	β	C_m	C_n	C_l	Pr_L	Pr_R	P_t
-8.61	.00	.0190	-.0004	.0009	4.40	4.28	708.
-3.57	.00	.0087	.0002	.0012	4.43	4.30	709.
.15	.00	.0006	.0003	.0015	4.47	4.33	705.
4.21	.00	-.0071	-.0003	.0019	4.43	4.30	707.
8.31	.00	-.0150	-.0005	.0019	4.40	4.27	707.
12.37	.01	-.0244	.0000	.0020	4.41	4.28	706.
16.43	.01	-.0369	-.0001	.0023	4.43	4.29	709.
19.36	.01	-.0474	-.0005	.0024	4.42	4.29	707.
.17	.00	.0007	.0004	.0015	4.44	4.31	709.

δ_a = -20° δ_l = 35° δ_r = 0   Span L = 0.77   Span R = 0.77 δ_t = 0   Nozzle no. 1   Gas   Air

α	β	C_m	C_n	C_l	Pr_L	Pr_R	P_t
	M=	.609		R= 1.226			
-9.22	.00	.0172	.0010	.0016			709.
-4.37	.00	.0126	.0006	.0020			710.
-.37	.00	.0082	.0006	.0025			708.
3.64	.00	.0045	.0002	.0031			709.
7.68	.00	.0010	-.0001	.0035			709.
11.69	.00	-.0021	-.0010	.0044			707.
15.75	.00	-.0048	-.0007	.0045			709.
18.71	.00	-.0053	-.0010	.0059			709.
-.35	.00	.0082	.0008	.0030			708.
	M=	.606		R= 1.223			
-9.01	.00	.0152	-.0023	.0034	1.68		708.
-4.40	.00	.0103	-.0028	.0041	1.68		707.
-.37	.00	.0056	-.0032	.0047	1.67		709.
3.68	.00	.0015	-.0035	.0049	1.67		709.
7.70	.00	-.0018	-.0042	.0057	1.68		710.
11.72	.00	-.0054	-.0052	.0062	1.68		709.
15.74	.00	-.0084	-.0054	.0073	1.69		709.
18.54	.00	-.0088	-.0055	.0078	1.68		709.
-.36	.00	.0056	-.0031	.0047	1.68		712.
	M=	.605		R= 1.221			
-9.05	.00	.0184	-.0027	.0052	1.68	1.67	707.
-4.35	.00	.0130	-.0029	.0054	1.68	1.67	710.
-.39	.00	.0077	-.0041	.0061	1.68	1.67	709.
3.64	.00	.0037	-.0043	.0066	1.68	1.67	707.
7.69	.00	.0009	-.0051	.0076	1.68	1.67	709.
11.73	.00	-.0029	-.0057	.0079	1.67	1.66	709.
15.77	.00	-.0058	-.0050	.0078	1.67	1.67	709.
18.55	.00	-.0067	-.0057	.0089	1.67	1.66	708.
-.39	.00	.0077	-.0038	.0059	1.67	1.67	709.
	M=	.605		R= 1.223			
-9.22	.00	.0182	-.0011	.0039	.92	.90	708.
-4.39	.00	.0127	-.0014	.0043	.92	.90	709.
-.39	.00	.0080	-.0023	.0048	.92	.90	709.
3.69	.00	.0042	-.0025	.0052	.92	.90	709.
7.69	.00	.0013	-.0031	.0059	.92	.90	708.
11.70	.00	-.0026	-.0039	.0068	.92	.89	709.
15.77	.00	-.0053	-.0032	.0069	.92	.89	709.
18.59	.00	-.0060	-.0041	.0079	.92	.89	709.
-.33	.00	.0078	-.0021	.0048	.92	.90	707.
	M=	.609		R= 1.232			
3.65	.00	.0040	-.0017	.0044	.92	.90	709.
3.65	.00	.0041	-.0026	.0052	.92	.89	709.
3.64	.00	.0040	-.0043	.0068	1.67	1.67	709.
3.64	.00	.0030	-.0065	.0074	2.67	2.68	709.
3.65	.00	.0043	.0004	.0035			709.

α	β	C_m	C_n	C_l	Pr_L	Pr_R	P_t
	M=	.902		R= 1.505			
-8.79	.00	.0138	.0010	.0001			702.
-3.93	.00	.0051	-.0010	.0008			703.
.12	.00	-.0039	-.0015	.0008			702.
4.17	.00	-.0106	.0013	.0004			701.
8.23	.00	-.0160	.0020	.0013			703.
12.28	.00	-.0228	.0015	.0014			702.
16.37	.01	-.0335	.0010	.0014			705.
19.22	.01	-.0427	.0013	.0014			704.
.14	.00	-.0032	-.0013	.0007			702.
	M=	.903		R= 1.507			
-8.58	.00	.0132	.0004	.0004	2.99		703.
-3.96	.00	.0044	-.0022	.0011	2.99		702.
.11	.00	-.0050	-.0045	.0015	2.99		702.
4.18	.00	-.0099	-.0049	.0022	2.98		702.
8.23	.00	-.0188	-.0050	.0035	3.01		702.
12.26	.01	-.0291	-.0062	.0040	3.01		703.
16.32	.01	-.0336	-.0099	.0046	3.00		704.
19.21	.01	-.0417	-.0119	.0053	2.99		704.
.10	.00	-.0029	-.0049	.0015	2.99		702.
	M=	.899		R= 1.506			
-8.64	.00	.0189	.0003	.0021	2.98	2.99	702.
-3.91	.00	.0102	-.0051	.0036	2.98	3.00	702.
.12	.00	.0032	-.0088	.0039	2.98	3.00	701.
4.16	.00	-.0053	-.0074	.0044	2.98	3.00	701.
8.19	.00	-.0151	-.0075	.0052	2.98	3.00	702.
12.27	.01	-.0214	-.0094	.0060	2.97	2.99	701.
16.34	.01	-.0298	-.0121	.0061	2.98	3.00	704.
19.39	.01	-.0327	-.0146	.0072	2.98	2.99	702.
.09	.00	.0022	-.0083	.0041	2.79	3.01	701.
	M=	.902		R= 1.510			
-8.79	-.00	.0162	.0025	.0008	1.32	1.29	704.
-3.93	.00	.0075	-.0019	.0021	1.32	1.29	702.
.10	.00	.0010	-.0057	.0030	1.31	1.28	701.
4.14	.00	-.0086	-.0029	.0028	1.33	1.30	703.
8.22	.00	-.0121	-.0031	.0035	1.33	1.30	703.
12.28	.00	-.0241	-.0039	.0040	1.32	1.29	702.
16.37	.01	-.0291	-.0051	.0039	1.33	1.30	702.
19.21	.01	-.0349	-.0067	.0042	1.32	1.28	702.
.18	.00	-.0003	-.0051	.0027	1.33	1.30	702.
	M=	.899		R= 1.503			
.11	.00	-.0015	-.0034	.0020	.70	.67	702.
.11	.00	.0004	-.0053	.0031	1.32	1.29	702.
.12	.00	.0028	-.0082	.0043	3.00	3.02	702.
.10	.00	.0032	-.0100	.0049	3.61	3.73	703.
.12	.00	-.0054	-.0012	.0011			703.
.12	.00	-.0043	-.0014	.0011			702.

δ_u = -20°	δ_l = 35°	δ_r = 0	Span L = 0.77	Span R = 0.77	δ_t = 0	Nozzle no. 1	Gas Air

α	β	C_m	C_n	C_l	Pr_L	Pr_R	P_t
	M= 1.099			K= 1.611			
-8.52	-.00	.0173	.0030	-.0004			707.
-3.64	-.00	.0054	.0030	.0000			709.
.38	.00	-.0061	.0017	.0008			707.
4.46	.00	-.0180	.0012	.0015			709.
8.51	.00	-.0259	.0016	.0011			709.
12.59	.00	-.0313	.0010	.0013			708.
16.66	.01	-.0414	.0005	.0015			709.
19.59	.01	-.0512	.0013	.0013			710.
.39	-.00	-.0065	.0020	.0009			707.
	M= 1.101			K= 1.607			
-8.34	-.00	.0159	.0008	.0006	4.07		707.
-3.65	-.00	.0040	-.0000	.0012	4.04		707.
.42	.00	-.0084	-.0013	.0019	4.09		707.
4.45	.00	-.0195	-.0021	.0026	4.07		707.
8.54	.00	-.0272	-.0017	.0027	4.06		707.
12.60	.00	-.0339	-.0033	.0028	4.06		703.
16.70	.01	-.0440	-.0041	.0029	4.12		708.
19.59	.01	-.0529	-.0060	.0031	4.09		705.
.41	.00	-.0081	-.0011	.0029	4.11		706.
	M= 1.103			K= 1.606			
-8.41	-.00	.0174	-.0001	.0015	4.07	4.08	709.
-3.65	.00	.0051	-.0033	.0030	4.06	4.08	708.
.43	.00	-.0071	-.0064	.0043	4.08	4.09	709.
4.47	.00	-.0190	-.0047	.0037	4.05	4.06	709.
8.55	.00	-.0275	-.0065	.0038	4.03	4.10	709.
12.60	.00	-.0325	-.0051	.0035	4.05	4.06	707.
16.69	.01	-.0429	-.0050	.0034	3.96	3.88	708.
16.65	.01	-.0419	-.0056	.0037	4.05	4.06	702.
19.54	.01	-.0522	-.0050	.0038	4.10	4.11	708.
.41	.00	-.0068	-.0062	.0043	4.09	4.11	705.
	M= 1.100			K= 1.599			
-8.34	.00	.0171	.0016	.0006	1.92	1.89	708.
-3.66	.00	.0059	-.0000	.0015	1.93	1.89	704.
.40	.00	-.0067	-.0019	.0025	1.94	1.91	706.
4.45	.00	-.0189	-.0019	.0026	1.91	1.88	710.
8.53	.00	-.0278	-.0016	.0025	1.94	1.91	710.
12.59	.00	-.0336	-.0018	.0022	1.94	1.91	710.
16.69	.01	-.0413	-.0020	.0026	1.93	1.89	709.
19.51	.01	-.0504	-.0009	.0026	1.93	1.90	709.
.42	.00	-.0068	-.0016	.0026	1.93	1.90	707.

δ_u = -20° δ_l = 35° δ_r = 0 Span L = 0.925 Span R = 0.925 δ_t = 15 Nozzle no. 1 Gas Air

M= .899 k= 1.483

α	β	C_m	C_n	C_l	P_{r_L}	P_{r_R}	P_t
.13	.00	-.0030	-.0013	.0009			702.
.12	.00	-.0015	-.0026	.0017	.76	.73	702.
.14	.00	-.0011	-.0026	.0021	1.36	1.32	702.
.12	.00	.0013	-.0037	.0032	2.97	2.80	702.
.12	.00	.0007	-.0030	.0032	2.93	2.85	702.

M= .607 k= 1.224

α	β	C_m	C_n	C_l	P_{r_L}	P_{r_R}	P_t
3.67	.00	.0047	.0003	.0033			709.
3.67	.00	.0039	-.0010	.0041	.58	.56	709.
3.67	.00	.0039	-.0016	.0045	1.01	.99	709.
3.67	.00	.0036	-.0021	.0047	1.54	1.54	709.

M= .608 k= 1.222

α	β	C_m	C_n	C_l	P_{r_L}	P_{r_R}	P_t
-.37	.00	.0085	.0007	.0027			709.
-.37	.00	.0079	-.0004	.0032	.59	.56	708.
-.37	.00	.0077	-.0014	.0042	1.01	.97	709.
-.37	.00	.0074	-.0019	.0042	1.59	1.55	709.

M= .606 k= 1.217

α	β	C_m	C_n	C_l	P_{r_L}	P_{r_R}	P_t
-9.06	.00	.0176	-.0012	.0036	1.61	1.55	708.
-4.39	.00	.0122	-.0016	.0039	1.60	1.55	709.
-.35	.00	.0071	-.0022	.0043	1.59	1.54	710.
3.65	.00	.0035	-.0023	.0048	1.60	1.55	709.
7.69	.00	.0001	-.0028	.0053	1.59	1.55	708.
11.73	.00	-.0038	-.0027	.0057	1.59	1.55	709.
15.76	.00	-.0064	-.0028	.0062	1.61	1.56	709.
18.56	.00	-.0068	-.0032	.0067	1.60	1.56	710.
-.31	.00	.0073	-.0020	.0046	1.60	1.55	709.

M= .607 R= 1.218

α	β	C_m	C_n	C_l	P_{r_L}	P_{r_R}	P_t
-9.03	.00	.0161	-.0020	.0028	1.59		709.
-4.37	.00	.0108	-.0024	.0034	1.59		708.
-.38	.00	.0063	-.0026	.0040	1.60		708.
3.66	.00	.0025	-.0027	.0044	1.60		707.
7.69	.00	-.0008	-.0030	.0047	1.59		709.
11.73	.00	-.0046	-.0036	.0056	1.57		709.
15.75	.00	-.0071	-.0033	.0056	1.59		709.
18.70	.00	-.0073	-.0033	.0062	1.59		708.
-.29	.00	.0063	-.0022	.0038	1.60		707.

M= .607 R= 1.218

α	β	C_m	C_n	C_l	P_{r_L}	P_{r_R}	P_t
-9.21	.00	.0176	.0005	.0018			709.
-4.40	.00	.0131	.0005	.0020			709.
-.36	.00	.0084	.0001	.0025			708.
3.65	.00	.0046	-.0000	.0029			709.
7.71	.00	.0013	-.0004	.0034			709.
11.73	.00	-.0022	-.0009	.0040			709.
15.77	.00	-.0048	-.0010	.0049			709.
18.56	.00	-.0052	-.0009	.0050			709.
-.38	.00	.0085	.0005	.0027			709.

M= .802 k= 1.429

α	β	C_m	C_n	C_l	P_{r_L}	P_{r_R}	P_t
-8.67	.00	.0167	-.0001	.0009			708.
-4.10	.00	.0123	-.0002	.0012			712.
-.07	.00	.0052	.0001	.0017			710.
3.97	.00	-.0004	.0010	.0017			707.
8.03	.00	-.0059	.0000	.0023			711.
12.10	.00	-.0125	.0006	.0024			709.
16.14	.01	-.0115	.0008	.0027			707.
18.97	.01	-.0082	.0013	.0028			709.
-.10	.00	.0056	.0005	.0021			708.

M= .803 k= 1.432

α	β	C_m	C_n	C_l	P_{r_L}	P_{r_R}	P_t
-8.93	.00	.0167	-.0020	.0018	1.63		709.
-4.08	.00	.0113	-.0026	.0023	1.62		709.
-.07	.00	.0037	-.0029	.0031	1.64		709.
3.96	.00	-.0030	-.0020	.0031	1.65		710.
8.04	.00	-.0081	-.0032	.0037	1.66		710.
12.08	.00	-.0132	-.0029	.0039	1.65		709.
16.13	.01	-.0138	-.0025	.0040	1.66		708.
18.98	.01	-.0104	-.0023	.0044	1.65		709.
-.02	.00	.0041	-.0022	.0031	1.64		709.

M= .802 k= 1.435

α	β	C_m	C_n	C_l	P_{r_L}	P_{r_R}	P_t
-8.83	.00	.0178	-.0012	.0023	1.64	1.58	710.
-4.08	.00	.0127	-.0021	.0030	1.63	1.58	709.
-8.83	.00	.0178	-.0012	.0023	1.64	1.58	710.
-4.08	.00	.0127	-.0021	.0030	1.63	1.58	709.
-.08	.00	.0051	-.0027	.0042	1.63	1.58	709.
3.96	.00	-.0015	-.0021	.0036	1.64	1.58	710.
8.02	.00	-.0063	-.0030	.0042	1.64	1.59	708.
12.09	.00	-.0132	-.0026	.0042	1.64	1.59	708.
16.13	.01	-.0130	-.0022	.0042	1.64	1.58	709.
19.00	.01	-.0095	-.0019	.0043	1.64	1.58	709.
-.00	.00	.0051	-.0025	.0041	1.63	1.59	708.

M= .893 k= 1.478

α	β	C_m	C_n	C_l	P_{r_L}	P_{r_R}	P_t
-8.65	.00	.0152	.0006	.0006			701.
-3.94	.00	.0064	-.0011	.0010			702.
.12	.00	-.0037	-.0014	.0010			700.
4.16	.00	-.0095	.0010	.0009			701.
8.22	.00	-.0148	.0017	.0016			700.
12.30	.00	-.0234	.0011	.0015			701.
16.35	.01	-.0290	.0010	.0016			702.
19.23	.01	-.0371	-.0003	.0023			702.
.18	.00	-.0034	-.0014	.0010			700.

M= .899 k= 1.488

α	β	C_m	C_n	C_l	P_{r_L}	P_{r_R}	P_t
-8.63	.00	.0149	.0018	.0003	2.93		702.
-3.93	.00	.0061	.0000	.0007	2.95		703.
.12	.00	-.0031	-.0011	.0014	2.94		702.
4.17	.00	-.0096	-.0021	.0015	2.96		704.
8.23	.00	-.0183	-.0031	.0033	2.96		702.
12.27	.01	-.0246	-.0050	.0041	2.94		701.
16.36	.01	-.0350	-.0062	.0040	2.95		702.
19.24	.01	-.0406	-.0082	.0048	2.95		702.
.19	.00	-.0028	-.0013	.0012	2.94		702.

M= .903 R= 1.491

α	β	C_m	C_n	C_l	P_{r_L}	P_{r_R}	P_t
-8.67	-.00	.0187	.0024	.0015	2.95	2.87	702.
-3.94	.00	.0112	-.0025	.0029	2.95	2.87	702.
4.16	.00	-.0075	-.0035	.0033	2.96	2.88	703.
8.24	.00	-.0159	-.0042	.0042	2.96	2.88	702.
12.31	.00	-.0261	-.0059	.0046	2.96	2.87	704.
16.35	.01	-.0278	-.0069	.0049	2.91	2.83	702.
19.23	.01	-.0397	-.0102	.0059	2.94	2.85	705.
.13	.00	.0015	-.0034	.0030	2.93	2.86	702.

$\delta_u = -20°$ $\delta_l = 35°$ $\delta_r = 0$ Span L = 0.925 Span R = 0.925 $\delta_t = 15$ Nozzle no. 1 Gas Air

α	β	C_m	C_n	C_l	P_{r_L}	P_{r_R}	P_t
	M= 1.092			R= 1.581			
-8.53	.00	.0181	.0026	.0005			709.
-3.64	.00	.0049	.0026	.0006			709.
.40	.00	-.0069	.0017	.0013			707.
4.46	.00	-.0183	.0010	.0021			709.
8.55	.00	-.0246	.0016	.0019			710.
12.61	.00	-.0318	.0007	.0020			708.
16.71	.01	-.0412	.0004	.0013			709.
19.56	.01	-.0506	.0010	.0019			709.
.46	.00	-.0074	.0016	.0016			702.
	M= 1.098			R= 1.576			
-8.40	.00	.0166	.0011	.0010	3.94		707.
-3.63	.00	.0040	.0003	.0018	3.97		704.
.42	.00	-.0087	-.0015	.0025	3.97		704.
4.49	.00	-.0202	-.0026	.0032	3.94		705.
8.53	.00	-.0279	-.0014	.0028	3.93		709.
12.62	.00	-.0328	-.0025	.0031	3.92		706.
16.68	.01	-.0422	-.0030	.0023	3.93		707.
19.58	.01	-.0522	-.0022	.0030	3.91		706.
.42	.00	-.0043	-.0012	.0024	4.[illegible]		706.
	M= 1.100			R= 1.563			
-8.53	.00	.0175	.0012	.0015	3.94	3.87	709.
-3.65	.00	.0050	-.0021	.0032	3.[illegible]	3.88	706.
.40	.00	-.0067	-.0043	.0044	3.94	3.85	703.
4.46	.00	-.0195	-.0033	.0037	3.95	3.86	707.
8.50	.00	-.0265	-.0037	.0041	3.93	3.81	705.
12.61	.01	-.0322	-.0039	.0040	3.91	3.82	707.
16.67	.01	-.0412	-.0041	.0040	3.97	3.76	706.
19.57	.01	-.0512	-.0026	.0037	3.89	3.79	707.
.48	.00	-.0080	-.0040	.0042	4.00	3.90	705.
	M= 1.302			R= 1.600			
-8.40	.00	.0199	.0015	.0004			707.
-3.92	.00	.0112	.0017	.0003			707.
.17	.00	.0028	.0018	.0010			707.
4.21	.00	-.0056	.0016	.0014			708.
8.31	.00	-.0133	.0019	.0015			707.
12.38	.01	-.0226	.0020	.0015			707.
16.47	.01	-.0355	.0016	.0016			707.
19.52	.01	-.0468	.0013	.0014			707.
.16	.00	.0032	.0020	.0011			707.
	M= 1.303			R= 1.591			
-8.64	.00	.0191	-.0003	.0012	4.45		708.
-3.91	.00	.0104	-.0007	.0015	4.45		707.
.15	.00	.0019	-.0005	.0020	4.46		708.
4.20	.00	-.0069	-.0007	.0025	4.44		707.
8.31	.00	-.0146	-.0005	.0025	4.44		707.
12.37	.01	-.0239	-.0002	.0026	4.47		707.
16.47	.01	-.0366	-.0005	.0026	4.45		706.
19.33	.01	-.0471	.0004	.0023	4.46		709.
.15	.00	.0022	-.0006	.0021	4.47		707.
	M= 1.301			R= 1.585			
-8.67	.00	.0193	-.0001	.0017	4.45	4.29	708.
-3.92	.00	.0111	-.0010	.0021	4.44	4.32	707.
.16	.00	.0023	-.0009	.0024	4.46	4.34	707.
4.21	.00	-.0065	-.0016	.0030	4.47	4.35	707.
8.29	.00	-.0141	-.0018	.0033	4.46	4.34	707.
12.36	.01	-.0236	-.0012	.0033	4.43	4.31	709.
16.45	.01	-.0362	-.0013	.0035	4.43	4.32	708.
19.32	.01	-.0465	-.0009	.0031	4.45	4.32	708.
.17	.00	.0024	-.0007	.0024	4.47	4.38	706.

α	β	C_m	C_n	C_l	P_{r_L}	P_{r_R}	P_t
	M= 1.699			R= 1.481			
-8.82	.00	.0201	.0002	.0000			707.
-4.09	.00	.0109	.0009	.0000			707.
-.04	.00	.0031	.0015	.0002			707.
4.02	.00	-.0048	.0020	.0002			707.
8.10	.00	-.0134	.0024	.0004			707.
12.13	.00	-.0227	.0021	.0004			707.
16.20	.00	-.0342	.0019	.0007			707.
19.06	.01	-.0438	.0019	.0009			707.
-.04	.00	.0033	.0016	.0003			707.
	M= 1.694			R= 1.464			
-8.84	.00	.0196	-.0002	.0004	5.14		707.
-4.10	.00	.0102	-.0003	.0005	5.18		708.
-.05	.00	.0023	.0003	.0008	5.21		708.
4.00	.00	-.0058	.0007	.0009	5.23		707.
8.10	.00	-.0143	.0007	.0010	5.20		707.
12.13	.00	-.0235	.0011	.0007	5.20		707.
16.20	.00	-.0350	.0010	.0012	5.20		707.
19.15	.01	-.0446	.0009	.0014	5.20		706.
-.05	.00	.0025	.0007	.0008	5.24		706.
	M= 1.699			R= 1.452			
-8.79	.00	.0198	-.0001	.0007	5.22	5.03	707.
-4.10	.00	.0105	-.0002	.0009	5.27	5.07	707.
-.05	.00	.0026	.0001	.0010	5.26	5.05	709.
4.03	.00	-.0053	-.0001	.0016	5.28	5.07	707.
8.08	.00	-.0142	.0003	.0014	5.25	5.04	705.
12.14	.00	-.0236	.0002	.0015	5.24	5.04	705.
16.18	.00	-.0347	.0009	.0015	5.22	5.02	708.
19.05	.01	-.0438	.0008	.0017	5.24	5.04	706.
-.03	.00	.0027	.0006	.0011	5.26	5.08	707.

δ_u = -20° δ_l = 35° δ_r = 0 Span L = 0.615 Span R = 0.925 δ_t = 0 Nozzle no. 1 Gas Air

M= .608 K= 1.224

α	β	C_m	C_n	C_l	Pr_L	Pr_R	P_t
-9.07	.00	.0172	.0010	.0006			709.
-4.40	.00	.0125	.0012	.0007			709.
-.35	.00	.0078	.0010	.0008			709.
3.67	.00	.0042	.0005	.0015			708.
7.69	.00	.0011	.0002	.0019			710.
11.73	.00	-.0025	-.0003	.0024			709.
11.73	.00	-.0025	-.0003	.0024			709.
15.75	.00	-.0053	-.0004	.0033			709.
18.60	.00	-.0057	-.0001	.0034			709.
-.38	.00	.0080	.0013	.0012			709.

M= .606 K= 1.226

α	β	C_m	C_n	C_l	Pr_L	Pr_R	P_t
-9.04	.00	.0135	.0000	.0011	1.53		709.
-4.40	.00	.0084	.0004	.0017	1.53		709.
-.35	.00	.0037	.0001	.0022	1.53		709.
3.65	.00	-.0001	.0001	.0025	1.58		709.
7.69	.00	-.0034	-.0006	.0032	1.58		709.
11.71	.00	-.0071	-.0012	.0041	1.60		709.
15.73	.00	-.0098	-.0014	.0048	1.53		709.
18.61	.00	-.0101	-.0013	.0043	1.58		709.
-.37	.00	.0038	.0001	.0020	1.53		708.

M= .608 K= 1.233

α	β	C_m	C_n	C_l	Pr_L	Pr_R	P_t
-9.06	.00	.0151	.0016	.0018	1.53	1.53	710.
-4.36	.00	.0096	.0012	.0022	1.53	1.54	709.
-.35	.00	.0049	.0004	.0026	1.60	1.54	707.
3.65	.00	.0009	.0001	.0032	1.53	1.54	708.
7.69	.00	-.0027	-.0003	.0035	1.53	1.54	710.
11.73	.00	-.0063	-.0006	.0045	1.53	1.54	711.
15.77	.00	-.0090	-.0007	.0049	1.60	1.54	709.
18.60	.00	-.0095	-.0010	.0052	1.53	1.54	710.
-.36	.00	.0049	.0007	.0026	1.60	1.55	709.

M= .798 K= 1.435

α	β	C_m	C_n	C_l	Pr_L	Pr_R	P_t
-8.79	.00	.0165	.0001	.0005			707.
-4.12	.00	.0120	.0003	.0005			706.
-.08	.00	.0053	.0004	.0015			706.
3.95	.00	-.0008	.0014	.0009			707.
8.00	.00	-.0057	.0004	.0019			708.
12.07	.00	-.0125	.0011	.0021			708.
16.13	.00	-.0121	.0013	.0020			709.
19.04	.00	-.0085	.0015	.0024			709.
-.07	.00	.0049	.0007	.0014			708.

M= .808 K= 1.453

α	β	C_m	C_n	C_l	Pr_L	Pr_R	P_t
-8.79	.00	.0152	-.0008	.0008	1.66		710.
-4.12	.00	.0103	-.0004	.0012	1.65		707.
-.10	.00	.0026	-.0001	.0019	1.64		709.
3.97	.00	-.0040	.0009	.0015	1.65		709.
8.04	.00	-.0083	.0000	.0023	1.64		708.
12.07	.00	-.0144	.0001	.0027	1.65		708.
16.15	.00	-.0144	.0004	.0028	1.64		708.
19.34	.00	-.0110	.0014	.0024	1.64		708.
-.06	.00	.0025	.0003	.0020	1.65		707.

M= .800 K= 1.439

α	β	C_m	C_n	C_l	Pr_L	Pr_R	P_t
-8.78	.00	.0165	.0001	.0013	1.66	1.57	707.
-4.12	.00	.0114	.0002	.0016	1.66	1.59	707.
-.09	.00	.0039	-.0000	.0025	1.66	1.60	707.
3.99	.00	-.0025	.0009	.0022	1.66	1.59	708.
8.04	.00	-.0082	.0000	.0029	1.66	1.60	709.
12.08	.00	-.0135	.0005	.0029	1.65	1.59	709.
16.13	.00	-.0138	.0010	.0028	1.65	1.60	708.
18.98	.00	-.0103	.0011	.0032	1.64	1.59	707.
-.09	.00	.0042	.0006	.0025	1.63	1.57	709.

M= .901 K= 1.505

α	β	C_m	C_n	C_l	Pr_L	Pr_R	P_t
-8.65	-.00	.0134	.0014	.0021			702.
-3.44	.00	.0055	-.0004	.0008			702.
.12	.00	-.0042	-.0011	.0007			702.
4.18	.00	-.0104	.0013	.0005			702.
8.24	.00	-.0160	.0022	.0012			704.
12.30	.00	-.0255	.0017	.0012			702.
16.38	.00	-.0309	.0011	.0013			702.
19.73	.01	-.0370	.0003	.0018			702.
.10	.00	-.0026	-.0011	.0008			702.

M= .902 K= 1.497

α	β	C_m	C_n	C_l	Pr_L	Pr_R	P_t
-8.67	.00	.0124	-.0004	.0023	2.37		701.
-3.93	.00	.0031	-.0017	.0007	2.35		702.
.13	.00	-.0038	-.0029	.0011	2.35		702.
4.16	.00	-.0119	.0000	.0009	2.35		702.
8.23	.00	-.0184	.0012	.0017	2.34		703.
12.31	.00	-.0270	.0004	.0023	2.35		701.
16.39	.00	-.0328	.0001	.0021	2.35		701.
19.32	.01	-.0436	-.0013	.0026	2.35		702.
.17	.00	-.0052	-.0027	.0012	2.35		701.

M= .900 K= 1.499

α	β	C_m	C_n	C_l	Pr_L	Pr_R	P_t
-8.74	.00	.0170	.0011	.0015	2.40	2.46	701.
-3.94	.00	.0075	-.0033	.0028	2.37	2.49	701.
.12	.00	-.0007	-.0052	.0032	2.38	2.40	702.
4.19	.00	-.0113	-.0015	.0026	2.37	2.48	702.
8.23	.00	-.0161	-.0004	.0032	2.36	2.48	701.
12.30	.00	-.0265	-.0009	.0034	2.35	2.47	701.
16.40	.01	-.0324	-.0018	.0034	2.34	2.46	702.
19.25	.01	-.0376	-.0031	.0040	2.34	2.46	701.
.12	.00	.0002	-.0046	.0030	2.35	2.47	702.

M= 1.102 K= 1.585

α	β	C_m	C_n	C_l	Pr_L	Pr_R	P_t
-8.43	-.00	.0173	.0024	-.0003			709.
-3.66	-.00	.0057	.0029	-.0001			706.
.40	-.00	-.0071	.0019	.0008			706.
4.45	.00	-.0181	.0016	.0016			704.
8.56	.00	-.0265	.0026	.0011			706.
12.59	.00	-.0319	.0012	.0012			705.
16.66	.00	-.0413	.0009	.0011			709.
19.57	.01	-.0503	.0017	.0012			708.
.41	-.00	-.0073	.0022	.0009			709.

M= 1.103 K= 1.593

α	β	C_m	C_n	C_l	Pr_L	Pr_R	P_t
-8.36	-.00	.0173	.0031	-.0004	3.95		710.
-3.63	-.00	.0044	.0027	.0000	4.03		706.
.40	-.00	-.0072	.0016	.0009	3.92		707.
4.45	.00	-.0189	.0011	.0015	3.91		707.
8.55	.00	-.0268	.0016	.0015	3.35		707.
12.61	.00	-.0327	.0010	.0014	3.35		707.
16.68	.00	-.0415	.0011	.0015	3.30		708.
19.64	.01	-.0511	.0017	.0015	3.46		708.
.43	-.00	-.0076	.0019	.0010	3.97		707.

M= 1.101 K= 1.592

α	β	C_m	C_n	C_l	Pr_L	Pr_R	P_t
-8.44	-.00	.0185	.0029	.0034	[illegible]	3.82	709.
-3.65	-.00	.0063	.0003	.0018	3.96	3.87	706.
.41	.00	-.0067	-.0014	.0028	3.95	3.85	706.
4.49	.00	-.0186	-.0003	.0026	3.95	3.86	706.
8.55	.00	-.0259	-.0004	.0028	3.95	3.86	707.
12.62	.00	-.0321	-.0004	.0024	3.95	3.86	708.
16.67	.00	-.0409	-.0000	.0026	3.33	3.83	707.
19.81	.01	-.0505	.0013	.0024	3.92	3.82	707.
.41	-.00	-.0056	-.0012	.0028	3.96	3.86	705.

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
α	β	C_m	C_n	C_l	P_{r_L}	P_{r_R}	P_t
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α	β	C_m	C_n	C_l	P_{r_L}	P_{r_R}	P_t
		[illegible]			[illegible]		
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[illegible] = -20° δ_L = 35° δ_R = 0   Span L = 0.770   Span R = 0.905 δ_t = 15   Nozzle no. 1   Gas   Air

M = .810   H = 1.219

α	β	C_m	C_n	C_l	Pr_L	Pr_R	P_t
[illegible]	.0[illegible]	.0178	.0064	.004			710.
[illegible]	.0[illegible]	.0130	.0035	.006			710.
-.44	.0[illegible]	.0094	.0003	[illegible]			709.
4.01	.0[illegible]	.0056	.0001	.012			709.
7.65	.0[illegible]	.0017	-.0002	.013			709.
11.68	.0[illegible]	-.0013	-.0008	.0026			[illegible]
15.03	.0[illegible]	-.0049	-.0010	.0033			709.
18.46	.0[illegible]	-.0082	-.0010	.0036			709.
-.36	.0[illegible]	.0066	.0010	.0036			[illegible]

M = .807   H = 1.218

α	β	C_m	C_n	C_l	Pr_L	Pr_R	P_t
-4.10	.0[illegible]	.0124	-.00[illegible]	.0004	1.5[illegible]		703.
-.35	.0[illegible]	.0110	-.0009	.0008	1.5[illegible]		708.
-.40	.0[illegible]	.0063	-.0027	.0011	1.5[illegible]		707.
3.64	.0[illegible]	.0025	-.0008	.0016	1.5[illegible]		708.
7.64	.0[illegible]	-.0001	-.0011	.0026	1.5[illegible]		709.
11.48	.0[illegible]	-.0037	-.0017	.0040	1.5[illegible]		707.
15.07	.0[illegible]	-.0057	-.0015	.0037	1.5[illegible]		707.
18.65	.0[illegible]	-.0070	-.0011	.0043	1.51		708.
-.48	.0[illegible]	.0063	-.0004	.0018	1.5[illegible]		709.

M = .806   H = 1.21[illegible]

α	β	C_m	C_n	C_l	Pr_L	Pr_R	P_t
-3.0[illegible]	.0[illegible]	.0177	.0004	.001[illegible]	1.57	1.54	708.
-.44	.0[illegible]	.0151	.0004	.0012	1.55	1.54	709.
-.44	.0[illegible]	.0076	-.0004	.0017	1.57	1.55	709.
3.64	.0[illegible]	.0034	-.0004	.0010	1.57	1.55	717.
7.64	.0[illegible]	.0008	-.0007	.0029	1.5[illegible]	1.51	709.
11.07	.0[illegible]	-.0009	-.0013	.0038	1.57	1.54	709.
15.07	.0[illegible]	-.0061	-.0010	.0044	1.57	1.54	709.
18.55	.0[illegible]	-.0063	-.0004	.0042	1.57	1.54	709.
-.45	.0[illegible]	.0071	.0002	.0041	1.54	1.56	709.

M = .804   H = 1.42[illegible]

α	β	C_m	C_n	C_l	Pr_L	Pr_R	P_t
-[illegible].11	.0[illegible]	.0168	-.000[illegible]	.0008			708.
-4.12	.0[illegible]	.0124	-.0004	.0007			710.
-.10	.0[illegible]	.0056	.0001	.0012			708.
3.94	.0[illegible]	-.0016	.0011	.0013			706.
8.00	.0[illegible]	-.0057	-.0003	.0022			709.
12.03	.00	-.0117	.0004	.0025			708.
16.07	.01	-.0115	.0014	.0022			708.
18.41	.01	-.0081	.0015	.0026			709.
-.08	.0[illegible]	.0056	.0004	.0017			709.

M = .808   H = 1.43[illegible]

α	β	C_m	C_n	C_l	Pr_L	Pr_R	P_t
-8.61	.0[illegible]	.0162	-.0008	.0011	1.63		710.
-4.12	.0[illegible]	.0118	-.0008	.0013	1.62		708.
-.09	.0[illegible]	.0036	-.0007	.0021	1.63		709.
3.94	.0[illegible]	-.0026	.0001	.0017	1.64		708.
7.99	.00	-.0075	-.0011	.0028	1.64		708.
11.98	.0[illegible]	-.0130	-.0002	.0027	1.63		709.
16.06	.01	-.0122	.0009	.0026	1.63		710.
18.92	.01	-.0088	.0011	.0030	1.63		708.
-.05	.0[illegible]	.0034	-.0004	.0021	1.62		708.

M = .801   H = 1.43[illegible]

α	β	C_m	C_n	C_l	Pr_L	Pr_R	P_t
-8.40	.0[illegible]	.0176	.0002	.0014	1.61	1.60	709.
-4.11	.00	.0125	-.0005	.0017	1.62	1.61	709.
-.07	.0[illegible]	.0053	-.0005	.0027	1.62	1.60	709.
3.95	.0[illegible]	-.0012	-.0000	.0022	1.62	1.60	710.
8.00	.00	-.0067	-.0010	.0029	1.62	1.60	710.
12.02	.00	-.0125	.0001	.0027	1.62	1.60	709.
16.06	.01	-.0116	.0010	.0026	1.61	1.59	710.
18.91	.01	-.0083	.0016	.0025	1.61	1.58	710.
-.06	.00	.0052	-.0005	.0026	1.61	1.60	709.

M = .892   H = 1.476

α	β	C_m	C_n	C_l	Pr_L	Pr_R	P_t
-4.76	.0[illegible]	.0160	.0007	.0003			701.
-4.05	.00	.0063	-.0011	.0009			707.
.11	.0[illegible]	-.0063	-.0015	.0007			706.
4.14	.0[illegible]	-.0075	.0004	.0010			701.
8.1[illegible]	.0[illegible]	-.0148	.0013	.0015			702.
12.05	.0[illegible]	-.0221	.0010	.0016			702.
16.41	.01	-.0303	.0009	.0017			702.
19.1[illegible]	.01	-.0372	-.0002	.0022			702.
.15	.0[illegible]	-.0029	-.0013	.0009			701.

M = .896   H = 1.488

α	β	C_m	C_n	C_l	Pr_L	Pr_R	P_t
-8.71	.0[illegible]	.0134	-.0010	.0010	2.41		705.
-4.43	.0[illegible]	.0057	-.0021	.0010	2.36		706.
.09	.0[illegible]	-.0026	-.0026	.0013	2.45		711.
4.13	.0[illegible]	-.0082	-.0013	.0016	2.36		712.
8.17	.0[illegible]	-.0165	-.0015	.0028	2.45		710.
12.04	.0[illegible]	-.0267	-.0007	.0027	2.46		702.
16.49	.01	-.0322	-.0006	.0025	2.36		706.
19.15	.01	-.0396	-.0024	.0033	2.36		713.
.18	.0[illegible]	-.0033	-.0019	.0011	2.36		711.

M = .895   H = 1.481

α	β	C_m	C_n	C_l	Pr_L	Pr_R	P_t
-8.06	.0[illegible]	.0176	.0004	.0020	2.4[illegible]	2.87	712.
-4.04	.0[illegible]	.0040	-.0030	.0029	2.31	2.84	702.
.10	.0[illegible]	.0016	-.0044	.0041	2.32	2.84	701.
4.16	.00	-.0076	-.0016	.0028	2.43	2.89	703.
8.19	.0[illegible]	-.0145	-.0019	.0035	2.31	2.88	712.
12.02	.0[illegible]	-.0236	-.0014	.0035	2.32	2.89	702.
16.27	.01	-.0276	-.0020	.0040	2.3[illegible]	2.87	702.
19.16	.01	-.0358	-.0041	.0044	2.32	2.89	712.
.18	.0[illegible]	.0021	-.0041	.0040	2.31	[illegible]	711.

M = 1.097   H = 1.577

α	β	C_m	C_n	C_l	Pr_L	Pr_R	P_t
-8.60	-.00	.0178	.0024	-.0001			707.
-4.02	.00	.0056	.0026	-.0000			703.
.01	.00	-.0069	.0017	.0007			706.
4.01	.00	-.0186	.0010	.0014			710.
8.50	.00	-.0257	.0017	.0014			708.
12.57	.00	-.0308	.0008	.0014			707.
16.03	.01	-.0411	.0005	.0014			709.
19.61	.01	-.0506	.0011	.0015			707.
.40	.00	-.0067	.0018	.0013			707.

M = 1.103   H = 1.574

α	β	C_m	C_n	C_l	Pr_L	Pr_R	P_t
-8.35	.00	.0157	.0018	.0003	3.3[illegible]		706.
-4.61	-.00	.0033	.0012	.0008	4.01		705.
.39	.00	-.0083	.0003	.0018	3.95		706.
4.43	.0[illegible]	-.0200	-.0002	.0023	3.95		708.
8.49	.00	-.0279	.0000	.0024	3.94		707.
12.58	.00	-.0335	-.0000	.0022	3.92		707.
16.62	.01	-.0418	-.0000	.0020	3.87		707.
19.56	.01	-.0519	.0006	.0022	3.92		709.
.58	.00	-.0090	.0006	.0017	4.01		707.

M = 1.103   H = 1.586

α	β	C_m	C_n	C_l	Pr_L	Pr_R	P_t
-8.47	.00	.0168	.0016	.0011	3.92	1.89	710.
-3.65	.00	.0057	-.0016	.0027	3.97	1.92	709.
.40	.00	-.0063	-.0032	.0039	3.91	1.86	707.
4.44	.00	-.0198	-.0017	.0031	3.95	1.90	708.
8.50	.00	-.0271	-.0019	.0046	3.92	1.87	707.
12.57	.00	-.0329	-.0014	.0031	3.92	1.87	708.
16.70	.01	-.0409	-.0015	.0032	3.83	1.86	707.
19.47	.01	-.0499	-.0001	.0032	3.80	1.76	706.
.42	.00	-.0071	-.0020	.0039	3.84	1.85	709.

δ_u = -20° δ_l = 35° δ_r = 0   Span L = 0.615   Span R = 0.925 δ_t = 15   Nozzle no. 1   Gas   Air

M= .803   [illegible]= 1.217

α	β	C_m	C_n	C_l	Pr_L	Pr_R	P_t
-9.12	.0[illegible]	.0160	-.00[illegible]	.0049			70[illegible].
-4.60	.0[illegible]	.0107	-.0086	.0044			709.
-.39	.00	.0061	-.0088	.0050			7[illegible]8.
3.62	.0[illegible]	.0019	-.0100	.0058			7[illegible]7.
7.64	.00	-.0011	-.0105	.0066			7[illegible]3.
11.68	.0[illegible]	-.0052	-.0104	.0069			704.
15.68	.01	-.0083	-.0109	.0076			70[illegible].
18.43	.01	-.0084	-.0110	.0082			7[illegible]3.
-.39	.00	.0062	-.0085	.0052			708.

M= .808   [illegible]= 1.2[illegible]3

α	β	C_m	C_n	C_l	Pr_L	Pr_R	P_t
-9.[illegible]7	.00	.0121	-.0094	.0050	1.5[illegible]		7[illegible]3.
-4.37	.00	.0066	-.0091	.0053	1.5[illegible]		709.
-.38	.00	.0016	-.0099	.0064	1.56		7[illegible]8.
3.64	.0[illegible]	-.0024	-.0116	.0070	1.57		700.
7.65	.00	-.0056	-.0124	.0066	1.57		7[illegible]3.
11.48	.0[illegible]	-.0096	-.0119	.0060	1.57		7[illegible]3.
15.67	.01	-.01[illegible]8	-.0120	.0063	1.56		7[illegible]4.
18.43	.01	-.0132	-.0124	.0068	1.57		703.
-.38	.00	.0016	-.0096	.0063	1.56		7[illegible]3.

M= .[illegible]   [illegible]= 1.[illegible]

α	β	C_m	C_n	C_l	Pr_L	Pr_R	P_t
-9.12	.00	.0136	-.0089	.0056	1.58	1.54	7[illegible]8.
-4.39	.00	.0079	-.0086	.0061	1.57	1.54	7[illegible]9.
-.36	.00	.0030	-.0096	.0069	1.57	1.54	709.
3.62	.00	-.0012	-.0107	.0075	1.57	1.54	[illegible]8.
7.65	.00	-.0049	-.0119	.0084	1.57	1.54	709.
11.67	.01	-.0091	-.0113	.0088	1.57	1.54	70[illegible].
15.65	.00	-.0118	-.0108	.0084	1.57	1.54	708.
18.59	.01	-.0125	-.0118	.0049	1.56	1.54	707.
-.36	.00	.0031	-.0092	.0066	1.57	1.54	709.

M= .805   [illegible]= 1.634

α	β	C_m	C_n	C_l	Pr_L	Pr_R	P_t
-8.47	.00	.0155	-.0117	.0061			708.
-4.12	.00	.0107	-.0119	.0066			706.
-.19	.00	.0025	-.0116	.0054			709.
3.58	.00	-.0063	-.0119	.0053			7[illegible]3.
7.99	.01	-.0092	-.0136	.0065			708.
12.02	.01	-.0153	-.0122	.0062			706.
16.06	.01	-.0146	-.0116	.0057			706.
18.95	.01	-.0110	-.0109	.0061			706.
-.02	.01	.0004	-.0131	.0056			704.
-.08	.00	.0033	-.0114	.0054			707.

M= .806   [illegible]= 1.635

α	β	C_m	C_n	C_l	Pr_L	Pr_R	P_t
-8.95	.00	.0144	-.0121	.0043	1.61		706.
-4.12	.00	.0085	-.0124	.0050	1.63		704.
-.09	.00	.0001	-.0122	.0058	1.62		707.
3.93	.01	-.0066	-.0124	.0061	1.62		707.
7.98	.01	-.0118	-.0144	.0076	1.61		707.
12.02	.01	-.0172	-.0126	.0068	1.62		709.
16.06	.01	-.0171	-.0122	.0065	1.61		705.
19.00	.01	-.0136	-.0113	.0066	1.62		707.
-.08	.00	.0006	-.0116	.0059	1.63		706.

M= .800   [illegible]= 1.636

α	β	C_m	C_n	C_l	Pr_L	Pr_R	P_t
-8.37	.00	.0156	-.0112	.0049	1.62	1.58	706.
-4.17	.00	.0098	-.0120	.0056	1.62	1.58	709.
-.08	.01	.0015	-.0123	.0067	1.61	1.58	711.
3.97	.01	-.0053	-.0126	.0067	1.62	1.59	708.
7.99	.01	-.0109	-.0141	.0077	1.61	1.58	707.
12.02	.01	-.0160	-.0126	.0072	1.61	1.58	708.
16.09	.01	-.0165	-.0119	.0068	1.62	1.59	709.
18.93	.01	-.0127	-.0115	.0069	1.62	1.59	709.
-.08	.00	.0018	-.0120	.0069	1.62	1.59	706.

M= .901   [illegible]= 1.455

α	β	C_m	C_n	C_l	Pr_L	Pr_R	P_t
-8.69	.0[illegible]	.0136	-.0134	.0044			706.
-3.91	.01	.0038	-.0154	.0055			700.
.15	.01	-.0046	-.0182	.0060			699.
4.14	.01	-.0126	-.0157	.0057			7[illegible]1.
8.19	.01	-.0150	-.0165	.0061			700.
12.24	.01	-.0256	-.0112	.0054			701.
16.28	.01	-.0318	-.0104	.0063			701.
19.14	.01	-.0367	-.012[illegible]	.0056			701.
.11	.01	-.0064	-.0147	.0057			7[illegible]1.

M= .903   [illegible]= 1.647

α	β	C_m	C_n	C_l	Pr_L	Pr_R	P_t
-8.76	.0[illegible]	.0123	-.0150	.0045	2.41		7[illegible]3.
-3.89	.01	.0011	-.0184	.0056	2.41		701.
.11	.01	-.0069	-.0205	.006[illegible]	2.41		702.
4.15	.01	-.0143	-.0164	.0061	2.31		7[illegible]3.
8.21	.01	-.0219	-.0145	.0066	2.4[illegible]		704.
12.25	.01	-.0316	-.0120	.0067	2.31		704.
16.30	.01	-.0354	-.0124	.0067	2.41		703.
19.70	.01	-.0414	-.0143	.0065	2.41		701.
.15	.01	-.0045	-.013[illegible]	.006[illegible]	2.41		699.

M= .901   [illegible]= 1.644

α	β	C_m	C_n	C_l	Pr_L	Pr_R	P_t
-8.72	.0[illegible]	.0110	-.0133	.0055	2.3[illegible]	2.85	7[illegible]2.
-3.44	.01	.0051	-.0205	.0070	2.3[illegible]	2.86	700.
.09	.01	-.0007	-.0214	.0062	2.[illegible]	2.84	701.
4.12	.01	-.0087	-.0182	.0078	2.[illegible]	2.85	702.
8.19	.01	-.0195	-.0160	.0080	2.31	2.87	704.
12.[illegible]5	.01	-.0262	-.0140	.0071	2.32	2.88	702.
1[illegible].[illegible]9	.01	-.0336	-.0141	.0069	2.32	2.87	701.
16.29	.01	-.0339	-.0141	.0069	2.32	2.87	701.
19.26	.01	-.0361	-.0156	.0075	2.32	2.88	700.
.09	.01	-.0005	-.0215	.0062	2.31	2.87	700.

M= 1.107   [illegible]= 1.573

α	β	C_m	C_n	C_l	Pr_L	Pr_R	P_t
-8.35	.00	.0165	-.0083	.0030			706.
-3.65	.00	.0052	-.0074	.0031			707.
.40	.01	-.0078	-.0082	.0037			709.
4.44	.00	-.0192	-.0089	.0043			705.
8.52	.00	-.0289	-.0089	.0042			709.
12.56	.01	-.0323	-.0094	.0042			705.
16.60	.01	-.0409	-.0083	.0042			705.
19.54	.01	-.0509	-.0074	.0040			707.
.41	.00	-.0076	-.0083	.0038			709.

M= 1.096   [illegible]= 1.587

α	β	C_m	C_n	C_l	Pr_L	Pr_R	P_t
-8.36	.00	.0166	-.0080	.0026	3.98		708.
-3.63	.00	.0067	-.0083	.0031	3.92		706.
.39	.00	-.0076	-.0088	.0037	3.96		706.
4.43	.00	-.0192	-.0096	.0041	3.98		709.
8.49	.00	-.0277	-.0095	.0041	3.91		707.
12.56	.01	-.0350	-.0098	.0042	3.95		711.
16.59	.01	-.0421	-.0079	.0041	4.01		707.
19.52	.01	-.0517	-.0064	.0036	4.[illegible]		705.
.40	.00	-.0075	-.0086	.0036	4.24		707.

M= 1.102   [illegible]= 1.588

α	β	C_m	C_n	C_l	Pr_L	Pr_R	P_t
-8.40	.00	.0172	-.0086	.0035	3.89	3.84	709.
-3.62	.00	.0059	-.0107	.0046	3.93	3.88	706.
.40	.00	-.0068	-.0120	.0056	4.00	3.95	705.
4.45	.00	-.0185	-.0110	.0051	3.89	3.85	707.
8.50	.00	-.0261	-.0116	.0053	3.87	3.83	708.
12.53	.01	-.0318	-.0110	.0053	3.88	3.86	707.
16.61	.01	-.0415	-.0081	.0052	3.90	3.86	706.
19.52	.01	-.0505	-.0077	.0047	3.86	3.79	704.
.39	.00	-.0059	-.0120	.0056	3.91	3.87	706.

δ_u = -20° δ_l = 35° δ_r = 5°   Span L = 0.015   Span R = 0.025 δ_t = 15   Nozzle no. 1   Gas   Air

α	β	C_m	C_n	C_l	Pr_L	Pr_R	P_t
M = 1.302			R = 1.57[illegible]				
-8.80	.00	.0203	-.0060	.0020			709.
-3.92	.00	.0118	-.0054	.0021			708.
.15	.00	.0036	-.0056	.0026			707.
4.18	.00	-.0052	-.0056	.0027			707.
8.26	.00	-.0128	-.0053	.0027			707.
12.32	.01	-.0226	-.0065	.0029			707.
16.41	.01	-.0357	-.0060	.0029			707.
19.43	.01	-.0467	-.0060	.0027			707.
.15	.00	.0033	-.0055	.0025			707.
M = 1.305			R = 1.57[illegible]				
-8.62	.00	.0198	-.0060	.0014	4.42		709.
-3.92	.00	.0116	-.0067	.0022	4.42		705.
.15	.00	.0041	-.0060	.0028	4.41		705.
4.20	.00	-.0055	-.0058	.0030	4.4[illegible]		707.
8.26	.00	-.0133	-.0051	.0033	4.41		708.
12.33	.01	-.0232	-.0046	.0031	4.41		707.
16.37	.01	-.0355	-.0044	.0042	4.4[illegible]		706.
19.42	.01	-.0463	-.0047	.0031	4.34		705.
.13	.00	.0032	-.0058	.0028	4.43		704.
M = 1.236			R = 1.575				
-8.71	.00	.0197	-.0066	.0035	4.41	4.36	706.
-3.92	.00	.0117	-.0073	.0033	4.41	4.35	706.
.16	.00	.0036	-.0061	.0034	4.4[illegible]	4.37	708.
4.20	.00	-.0056	-.0063	.0039	4.45	4.34	707.
8.26	.00	-.0130	-.0067	.0040	4.40	4.42	706.
12.30	.01	-.0225	-.0055	.0040	4.40	4.38	706.
16.37	.01	-.0356	-.0056	.0042	4.4[illegible]	4.36	706.
19.44	.01	-.0460	-.0051	.0039	4.37	4.36	705.
.15	.00	.0036	-.0062	.0035	4.37	4.35	706.

α	β	C_m	C_n	C_l	Pr_L	Pr_R	P_t
M = 1.7[illegible]			R = 1.4[illegible]				
-8.77	.00	.0201	-.0065	.00[illegible]			[illegible]
-4.10	.00	.0115	-.0044	.0011			[illegible]
-.06	.00	.0028	-.0034	.0014			[illegible]
3.99	.00	-.0056	-.003[illegible]	.0013			[illegible]
7.99	.00	-.0137	-.002[illegible]	.0012			[illegible]
12.06	.00	-.0230	-.0023	.0012			[illegible]
16.09	.01	-.0345	-.0026	.0014			[illegible]
19.05	.01	-.0440	-.0026	.0015			[illegible]
-.06	.00	.0029	-.0036	.0014			[illegible]
M = 1.699			R = 1.45[illegible]				
-8.98	.00	.0201	-.0046	.0004	5.12		717.
-4.10	.00	.0106	-.0044	.0013	5.14		717.
-.07	.00	.0027	-.0040	.0013	5.14		716.
3.98	.00	-.0054	-.0034	.0014	5.18		717.
8.02	.00	-.0138	-.002[illegible]	.0014	5.18		718.
12.08	.00	-.0232	-.002[illegible]	.0012	5.1[illegible]		718.
16.11	.00	-.0342	-.0017	.0014	5.14		7[illegible]9.
19.08	.01	-.0434	-.0016	.0015	5.15		7[illegible]0.
-.08	.00	.0028	-.0034	.0014	5.17		7[illegible]9.
M = 1.70[illegible]			R = 1.44[illegible]				
-8.75	.00	.0205	-.0043	.0010	5.15	5.02	718.
-4.10	.00	.0111	-.0047	.0010	5.14	5.0[illegible]	717.
-.08	.00	.0031	-.0041	.0013	5.2[illegible]	5.11	717.
3.97	.00	-.0047	-.0037	.0020	5.21	5.14	717.
8.05	.00	-.0137	-.0032	.0017	5.23	5.21	718.
12.08	.00	-.0224	-.0030	.0013	5.41	5.32	718.
16.11	.01	-.0341	-.0014	.0017	5.41	5.41	718.
19.00	.01	-.0433	-.0015	.0017	5.42	5.43	719.
-.09	.00	.0033	-.0039	.0016	5.21	5.42	717.

δ_u = -20° δ_l = 5° δ_r = -5°   Span L = 0.015   Span R = 0.025 δ_t = 15°   Nozzle no. 1   Gas   Air

α	β	C_m	C_n	C_l	Pr_L	Pr_R	P_t
M = .609			R = 1.213				
-9.06	-.00	.0166	.0100	-.0025			712.
-4.34	.00	.0116	.0097	-.0023			711.
-.37	.00	.0066	.0094	-.0022			709.
3.65	.00	.0026	.0101	-.0019			709.
7.65	.00	-.0006	.0098	-.0009			710.
11.64	.00	-.0045	.0092	-.0005			709.
15.67	.00	-.0076	.0089	-.0001			709.
18.48	.00	-.0080	.0086	.0007			709.
-.38	-.00	.0066	.0100	-.0021			708.
M = .609			R = 1.222				
-9.07	-.00	.0132	.0087	-.0018	1.58		712.
-4.38	-.00	.0076	.0089	-.0016	1.58		710.
-.38	.00	.0024	.0089	-.0009	1.57		710.
3.62	.00	-.0015	.0095	-.0011	1.59		711.
7.65	.00	-.0051	.0090	.0002	1.58		712.
11.67	.00	-.0089	.0082	.0006	1.57		712.
15.69	.00	-.0119	.0086	.0007	1.58		710.
18.55	.00	-.0122	.0081	.0012	1.58		709.
-.36	.00	.0025	.0088	-.0010	1.58		710.
M = .611			R = 1.226				
-9.19	-.00	.0143	.0092	-.0010	1.58	1.54	712.
-4.39	-.00	.0086	.0095	-.0008	1.58	1.54	709.
-.38	.00	.0035	.0091	-.0005	1.57	1.54	707.
3.64	.00	-.0007	.0097	-.0002	1.57	1.54	708.
7.65	.00	-.0043	.0094	.0003	1.60	1.56	710.
11.69	.00	-.0084	.0090	.0009	1.59	1.56	713.
15.68	.00	-.0115	.0088	.0015	1.58	1.55	712.
18.54	.00	-.0118	.0083	.0017	1.58	1.55	712.
-.39	.00	.0035	.0090	-.0004	1.57	1.56	709.

α	β	C_m	C_n	C_l	Pr_L	Pr_R	P_t
M = .906			R = 1.487				
-8.76	-.00	.0140	.0142	-.0036			705.
-3.93	-.00	.0039	.0133	-.0037			702.
.14	-.00	-.0090	.0156	-.0047			701.
4.16	-.00	-.0116	.0161	-.0060			706.
8.19	-.00	-.0181	.0156	-.0028			706.
12.25	.00	-.0270	.0159	-.0022			702.
16.30	.00	-.0309	.0125	-.0019			702.
19.19	.00	-.0416	.0115	-.0015			702.
.12	-.00	-.0073	.0159	-.0049			701.
M = .900			R = 1.473				
-8.72	-.00	.0138	.0126	-.0033	2.95		700.
-3.92	-.00	.0018	.0148	-.0041	2.95		701.
.12	-.00	-.0062	.0141	-.0045	2.95		703.
4.16	-.00	-.0137	.0151	-.0036	2.94		702.
8.19	-.00	-.0196	.0146	-.0019	2.91		703.
12.26	.00	-.0278	.0130	-.0013	2.94		702.
16.28	.00	-.0362	.0113	-.0010	2.95		704.
19.26	.00	-.0426	.0088	.0000	2.92		704.
.13	-.00	-.0095	.0144	-.0040	2.96		702.
M = .900			R = 1.474				
-8.65	-.00	.0161	.0125	-.0021	2.93	2.88	702.
-3.93	-.00	.0053	.0106	-.0021	2.91	2.88	703.
.11	.00	-.0048	.0113	-.0030	2.93	2.89	702.
4.16	-.00	-.0104	.0133	-.0025	2.93	2.88	702.
8.20	-.00	-.0187	.0133	-.0013	2.91	2.88	702.
12.21	.00	-.0276	.0115	-.0005	2.92	2.87	702.
16.28	.00	-.0326	.0102	-.0003	2.91	2.87	702.
19.33	.00	-.0417	.0088	.0002	2.93	2.86	703.
.09	-.00	-.0038	.0115	-.0029	2.93	2.88	709.

δ_u = -20° δ_l = 35° δ_r = -5° Span L = 0.615 Span R = 0.925 δ_t = 15° Nozzle no. 1 Gas Air

M= .806 k= 1.434

α	β	C_m	C_n	C_l	P_{r_L}	P_{r_R}	P_t
-8.5	-.00	.0157	.0094	-.0025			711.
-4.12	-.00	.0109	.0108	-.0028			710.
-.08	-.00	.0031	.0120	-.0030			710.
3.46	-.00	-.0041	.0134	-.0031			710.
7.99	.00	-.0089	.0119	-.0018			708.
12.03	.00	-.0155	.0128	-.0018			710.
16.08	.00	-.0144	.0132	-.0014			711.
18.33	.00	-.0108	.0134	-.0014			711.
-.07	-.00	.0025	.0126	-.0030			709.

M= .807 k= 1.432

α	β	C_m	C_n	C_l	P_{r_L}	P_{r_R}	P_t
-8.05	-.00	.0146	.0092	-.0023	1.62		709.
-4.12	-.00	.0089	.0102	-.0026	1.62		708.
-.09	-.00	.0008	.0113	-.0023	1.68		708.
3.95	-.00	-.0063	.0133	-.0024	1.65		709.
7.98	.00	-.0119	.0111	-.0010	1.65		710.
12.03	.00	-.0181	.0123	-.0011	1.64		710.
16.05	.00	-.0169	.0129	-.0010	1.64		709.
16.41	.00	-.0132	.0129	-.0007	1.64		708.
-.08	-.00	.0004	.0119	-.0024	1.63		709.

M= .807 k= 1.433

α	β	C_m	C_n	C_l	P_{r_L}	P_{r_R}	P_t
-8.5	-.00	.0157	.0094	-.0020	1.63	1.54	710.
-4.11	-.00	.0094	.0104	-.0019	1.65	1.61	708.
-.06	-.00	.0015	.0113	-.0018	1.64	1.61	709.
3.96	-.00	-.0047	.0132	-.0019	1.63	1.60	708.
8.06	.00	-.0100	.0111	-.0008	1.63	1.60	708.
12.5	.00	-.0166	.0123	-.0004	1.64	1.59	708.
16.06	.00	-.0163	.0128	[illegible]	1.63	1.53	709.
18.03	.00	-.0122	.0128	[illegible]	1.66	1.53	708.
-.08	-.00	.0017	.0120	-.0018	1.65	1.61	708.

M= 1.106 k= 1.556

α	β	C_m	C_n	C_l	P_{r_L}	P_{r_R}	P_t
-8.52	-.00	.0175	.0119	-.0025			708.
-3.65	-.00	.0057	.0117	-.0022			707.
.38	-.00	-.0072	.0108	-.0014			708.
4.46	-.00	-.0185	.0106	-.0008			707.
8.47	.00	-.0258	.0117	-.0011			709.
12.58	.00	-.0318	.0100	-.0007			708.
16.60	.00	-.0407	.0089	-.0009			709.
19.66	.01	-.0511	.0092	-.0005			708.
.38	-.00	-.0071	.0109	-.0013			708.

M= 1.090 k= 1.556

α	β	C_m	C_n	C_l	P_{r_L}	P_{r_R}	P_t
-8.57	-.00	.0183	.0127	-.0028	3.90		707.
-3.65	-.00	.0055	.0114	-.0021	3.94		706.
.41	-.00	-.0078	.0105	-.0014	3.93		708.
4.43	-.00	-.0192	.0105	-.0008	3.92		707.
8.49	.00	-.0270	.0112	-.0007	3.91		707.
12.57	.00	-.0335	.0098	-.0006	3.94		709.
16.60	.00	-.0413	.0091	-.0008	3.88		704.
19.69	.00	-.0523	.0096	-.0004	3.93		708.
.38	-.00	-.0067	.0110	-.0015	3.94		706.

M= 1.100 k= 1.574

α	β	C_m	C_n	C_l	P_{r_L}	P_{r_R}	P_t
-8.42	-.00	.0179	.0127	-.0024	3.93	3.82	711.
-3.66	-.00	.0063	.0105	-.0014	3.93	3.85	703.
.38	-.00	-.0067	.0087	-.0004	3.93	3.88	706.
4.43	-.00	-.0184	.0093	-.0003	3.91	3.84	706.
8.47	.00	-.0267	.0094	.0000	3.89	3.83	707.
12.53	.00	-.0315	.0086	.0000	3.97	3.80	707.
16.62	.00	-.0421	.0081	.0001	3.93	3.87	712.
19.58	.00	-.0515	.0088	.0001	3.90	3.81	712.
.41	-.00	-.0074	.0088	-.0004	3.97	3.90	709.

M= 1.301 k= 1.551

α	β	C_m	C_n	C_l	P_{r_L}	P_{r_R}	P_t
-5.72	-.00	.0205	.0075	-.0011			708.
-3.92	.00	.0119	.0081	-.0009			708.
.16	.00	.0037	.0082	-.0005			708.
4.22	.00	-.0053	.0086	-.0002			708.
8.26	.00	-.0128	.0091	.0000			707.
12.32	.00	-.0227	.0085	.0002			707.
16.39	.00	-.0354	.0074	.0004			708.
.22	.00	.0031	.0086	-.0004			708.

M= 1.301 k= 1.554

α	β	C_m	C_n	C_l	P_{r_L}	P_{r_R}	P_t
-8.72	-.00	.0165	.0074	-.0013	4.45		708.
-3.91	-.00	.0113	.0078	-.0010	4.45		709.
.13	.00	.0029	.0082	-.0005	4.45		709.
4.18	.00	-.0055	.0085	-.0002	4.45		708.
8.26	.00	-.0130	.0085	.0000	4.42		708.
12.32	.00	-.0226	.0087	.0001	4.43		709.
16.36	.01	-.0356	.0076	.0004	4.41		707.
19.12	.01	-.0454	.0070	.0003	4.45		707.
.20	-.00	.0028	.0082	-.0005	4.45		708.

M= 1.302 k= 1.553

α	β	C_m	C_n	C_l	P_{r_L}	P_{r_R}	P_t
-8.09	-.00	.0144	.0082	-.0012	4.44	4.36	709.
-3.91	-.00	.0114	.0075	-.0010	4.42	4.35	708.
.11	.00	.0033	.0079	-.0006	4.41	4.36	708.
4.23	.00	-.0056	.0078	.0000	4.41	4.34	707.
8.25	.00	-.0130	.0076	.0003	4.40	4.31	708.
12.32	.00	-.0225	.0075	.0006	4.47	4.39	707.
16.36	.00	-.0364	.0070	.0009	4.46	4.37	709.
19.33	.01	-.0456	.0066	.0008	4.41	4.34	709.
.26	-.00	.0032	.0078	-.0006	4.43	4.34	708.

M= 1.697 k= 1.434

α	β	C_m	C_n	C_l	P_{r_L}	P_{r_R}	P_t
-8.89	.00	.0205	.0047	-.0008			709.
-4.09	.00	.0109	.0054	-.0007			709.
-.06	.00	.0028	.0059	-.0006			707.
3.99	.00	-.0051	.0066	-.0004			707.
8.05	.00	-.0136	.0065	-.0003			707.
12.10	.00	-.0232	.0061	-.0002			707.
16.14	.00	-.0344	.0059	.0000			707.
19.17	.01	-.0439	.0057	.0002			707.
-.07	.00	.0031	.0065	-.0006			708.

M= 1.696 k= 1.422

α	β	C_m	C_n	C_l	P_{r_L}	P_{r_R}	P_t
-8.03	.00	.0206	.0047	-.0009	5.23		707.
-4.10	.00	.0112	.0052	-.0007	5.22		708.
-.05	.00	.0030	.0054	-.0005	5.23		707.
3.99	.00	-.0051	.0066	-.0005	5.23		707.
8.05	.00	-.0136	.0066	-.0003	5.21		706.
12.09	.00	-.0224	.0060	-.0003	5.27		707.
16.14	.00	-.0360	.0059	-.0001	5.24		708.
18.98	.00	-.0432	.0057	.0000	5.22		707.
-.05	.00	.0036	.0066	-.0007	5.19		707.

M= 1.699 k= 1.414

α	β	C_m	C_n	C_l	P_{r_L}	P_{r_R}	P_t
-8.05	.00	.0208	.0047	-.0009	5.23	5.10	707.
-4.10	.00	.0113	.0049	-.0006	5.25	5.12	707.
-.05	.00	.0032	.0096	-.0005	5.23	5.09	707.
3.98	.00	-.0046	.0055	-.0001	5.23	5.09	707.
8.03	.00	-.0135	.0054	-.0000	5.22	5.09	707.
12.07	.00	-.0228	.0052	.0001	5.20	5.09	707.
16.17	.00	-.0338	.0053	.0001	5.22	5.09	707.
19.02	.00	-.0432	.0055	.0003	5.22	5.09	707.
-.15	-.00	.0036	.0060	-.0006	5.22	5.19	707.

$\delta_u = -20°$ $\delta_l = 35°$ $\delta_r = -10°$ Span L = 0.615 Span R = 0.925 $\delta_t = 15°$ Nozzle no. 1 Gas Air

α	β	C_m	C_n	C_l	Pr_L	Pr_R	P_t
	M = .606			R = 1.215			
-9.1[illegible]	-.0[illegible]	.0151	.0134	-.0045			7[illegible]9.
-4.33	-.0[illegible]	.0[illegible]	.0187	-.0047			7[illegible]8.
-.34	-.0[illegible]	.0054	.0180	-.0040			7[illegible]9.
4.06	-.0[illegible]	.0013	.0184	-.0040			708.
7.66	-.00	-.0022	.0136	-.0034			708.
11.67	-.00	-.0060	.0182	-.0027			710.
15.66	.00	-.0045	.0176	-.0021			710.
18.55	.00	-.0044	.0176	-.0019			709.
-.38	-.0[illegible]	.0052	.0184	-.0040			709.
	M = .606			R = 1.211			
-9.17	-.0[illegible]	.0221	.0175	-.0037	1.5[illegible]		707.
-4.34	-.	.0[illegible]	.0174	-.0047	1.54		710.
-.37	-.0[illegible]	.0009	.0174	-.0033	1.54		709.
3.63	-.	-.0033	.0176	-.0030	1.5[illegible]		709.
7.65	-.00	-.0070	.0184	-.0027	1.53		709.
11.67	-.00	-.0110	.0175	-.0020	1.54		709.
15.68	.00	-.0139	.0187	-.0011	1.5[illegible]		709.
18.51	.00	-.0144	.0166	-.0006	1.5[illegible]		709.
-.38	-.0[illegible]	.0017	.0173	-.0041	1.54		709.
	M = .607			R = 1.222			
-4.12	-.00	.0131	.0176	-.0043	1.54	1.55	710.
-4.35	-.00	.0072	.0176	-.0036	1.54	1.55	709.
-.39	-.00	.0013	.0173	-.0032	1.54	1.54	709.
3.6[illegible]	-.00	-.0026	.0174	-.0028	1.54	1.54	709.
7.64	-.00	-.0081	.0185	-.0022	1.54	1.55	709.
11.67	-.00	-.0115	.0176	-.0018	1.54	1.55	708.
15.67	-.00	-.0136	.0173	-.0010	1.54	1.55	709.
18.44	.00	-.0138	.0176	-.0009	1.54	1.55	708.
18.44	.00	-.0136	.0172	-.0009	1.54	1.55	708.
-.40	-.	.0018	.0174	-.0041	1.54	1.55	708.
	M = .700			R = 1.62[illegible]			
-8.40	-.00	.0152	.0216	-.0043			707.
-4.12	-.00	.0089	.0224	-.0047			707.
-.09	-.00	.0020	.0234	-.0048			708.
3.96	-.00	-.0051	.0248	-.0048			709.
8.00	-.00	-.0114	.0231	-.0048			712.
12.02	-.00	-.0168	.0235	-.0034			712.
16.06	-.00	-.0162	.0239	-.0032			710.
18.43	.00	-.0125	.0233	-.0028			710.
-.08	-.00	.0017	.0237	-.0043			710.
	M = .807			R = 1.641			
-8.09	-.00	.0139	.0211	-.0043	1.65		709.
-4.12	-.00	.0079	.0213	-.0043	1.65		708.
-.09	-.00	-.0003	.0226	-.0043	1.65		708.
3.94	-.00	-.0075	.0245	-.0045	1.65		708.
8.01	-.00	-.0137	.0228	-.0037	1.65		710.
12.04	-.00	-.0195	.0235	-.0034	1.65		708.
16.08	-.00	-.0183	.0233	-.0026	1.65		708.
18.38	.00	-.0148	.0227	-.0025	1.65		707.
-.06	-.00	-.0003	.0232	-.0047	1.66		708.
	M = .806			R = 1.643			
-8.38	-.00	.0148	.0210	-.0042	1.65	1.62	710.
-4.12	-.00	.0088	.0217	-.0044	1.65	1.61	708.
-.10	-.00	.0005	.0224	-.0044	1.66	1.62	708.
3.94	-.00	-.0065	.0242	-.0043	1.66	1.62	708.
8.00	-.00	-.0126	.0223	-.0036	1.66	1.62	708.
12.04	-.00	-.0188	.0231	-.0029	1.66	1.62	709.
16.07	-.00	-.0170	.0230	-.0027	1.66	1.62	709.
18.41	.00	-.0161	.0225	-.0023	1.66	1.62	708.
-.08	-.00	.0009	.0227	-.0047	1.66	1.62	708.

α	β	C_m	C_n	C_l	Pr_L	Pr_R	P_t
	M = .896			R = 1.483			
-8.81	-.01	.0167	.0272	-.0056			700.
-3.93	-.01	.0030	.0280	-.0066			700.
.12	-.00	-.0087	.0295	-.0072			701.
4.13	-.00	-.0112	.0281	-.0061			701.
8.18	-.00	-.0152	.0274	-.0059			702.
12.25	-.00	-.0239	.0253	-.0043			701.
16.28	-.00	-.0323	.0222	-.0040			700.
19.25	.00	-.0374	.0187	-.0026			700.
.10	-.00	-.0058	.0294	-.0073			701.
	M = .895			R = 1.495			
-8.75	-.01	.0133	.0262	-.0066	2.42		703.
-3.92	-.01	.0005	.0299	-.0070	2.45		703.
.11	-.00	-.0069	.0269	-.0071	2.37		702.
4.15	-.00	-.0131	.0270	-.0056	2.44		702.
8.20	-.00	-.0206	.0266	-.0044	2.32		703.
12.27	-.00	-.0318	.0241	-.0035	2.44		702.
16.29	-.00	-.0382	.0205	-.0029	2.45		703.
19.22	.00	-.0624	.0168	-.0016	2.36		703.
.11	-.00	-.0076	.0273	-.0072	2.43		704.
	M = .897			R = 1.489			
-8.71	-.00	.0151	.0268	-.0069	2.32	2.65	701.
-3.87	-.00	.0045	.0236	-.0069	2.3[illegible]	2.66	699.
.11	-.00	-.0054	.0254	-.0061	2.44	2.68	700.
4.17	-.00	-.0113	.0255	-.0047	2.44	2.68	699.
8.17	-.00	-.0189	.0253	-.0036	2.45	2.68	697.
12.23	-.00	-.0257	.0226	-.0025	2.44	2.68	696.
16.26	.00	-.0302	.0209	-.0020	2.45	2.64	692.
19.29	.00	-.0337	.0180	-.0012	2.45	2.66	693.
.14	-.00	-.0058	.0287	-.0066	2.44	2.63	702.
	M = 1.103			R = 1.569			
-8.43	-.00	.0175	.0231	-.0043			709.
-3.65	-.00	.0059	.0223	-.0038			709.
.39	-.00	-.0072	.0211	-.0030			709.
4.44	-.00	-.0188	.0204	-.0025			709.
8.55	-.00	-.0279	.0213	-.0026			712.
12.57	-.00	-.0326	.0190	-.0021			712.
16.65	.00	-.0427	.0164	-.0019			714.
19.55	.00	-.0517	.0154	-.0014			712.
.39	-.00	-.0064	.0216	-.0030			707.
	M = 1.099			R = 1.568			
-8.39	-.00	.0176	.0236	-.0043	3.96		706.
-3.65	-.00	.0053	.0220	-.0038	3.96		709.
.40	-.00	-.0076	.0211	-.0030	3.96		709.
4.44	-.00	-.0195	.0208	-.0024	3.96		710.
8.51	-.00	-.0290	.0211	-.0023	3.95		712.
12.55	-.00	-.0342	.0188	-.0019	3.96		715.
16.61	.00	-.0425	.0169	-.0018	3.92		709.
19.51	.00	-.0522	.0161	-.0013	3.93		713.
.38	-.00	-.0073	.0211	-.0030	3.91		712.
	M = 1.104			R = 1.580			
-8.41	-.01	.0174	.0232	-.0042	3.92	3.83	709.
-3.65	-.00	.0055	.0217	-.0036	3.94	3.88	707.
.39	-.00	-.0073	.0200	-.0025	3.91	3.87	706.
4.44	-.00	-.0143	.0197	-.0021	3.96	3.88	708.
8.50	-.00	-.0272	.0199	-.0018	3.94	3.87	707.
12.56	-.00	-.0327	.0175	-.0019	3.93	3.86	710.
16.62	.00	-.0426	.0157	-.0017	3.96	3.89	713.
19.57	.00	-.0520	.0151	-.0009	3.92	3.85	709.
.39	-.00	-.0076	.0202	-.0026	3.96	3.87	707.

$\delta_u = -20°$ $\delta_l = 35°$ $\delta_r = -10°$ Span L = 0.615 Span R = 0.985 $\delta_t = 15°$ Nozzle no. 1 Gas Air

α	β	C_m	C_n	C_l	P_{r_L}	P_{r_R}	P_t
M= 1.302			R= 1.571				
-8.75	-.00	.0266	.0165	-.0028			709.
-3.71	-.00	.0119	.0163	-.0026			708.
.13	-.00	.0034	.0164	-.0022			709.
4.22	-.00	-.0052	.0160	-.0017			709.
8.26	.00	-.0127	.0162	-.0014			709.
12.31	.00	-.0226	.0150	-.0013			709.
16.37	.00	-.0354	.0135	-.0009			706.
19.06	.00	-.0456	.0125	-.0009			709.
.13	-.00	.0039	.0163	-.0021			709.
M= 1.301			R= 1.5[illegible]				
-8.79	-.00	.0198	.0167	-.0027	4.42		704.
-3.72	-.00	.0117	.0157	-.0025	4.43		707.
.12	-.00	.0036	.0156	-.0020	4.43		708.
4.19	-.00	-.0054	.0154	-.0017	4.43		709.
8.26	.00	-.0129	.0164	-.0014	4.42		709.
12.30	.00	-.0226	.0150	-.0011	4.44		709.
16.37	.00	-.0357	.0134	-.0006	4.43		709.
19.34	.00	-.0463	.0116	-.0007	4.42		709.
.13	-.00	.0036	.0160	-.0014	4.43		708.
M= 1.298			R= 1.5[illegible]				
-8.77	-.00	.0200	.0164	-.0027	4.41	4.32	707.
-3.72	-.00	.0116	.0155	-.0024	4.42	4.31	707.
.13	-.00	.0034	.0152	-.0018	4.43	4.34	708.
4.19	-.00	-.0055	.0151	-.0013	4.42	4.34	709.
8.28	.00	-.0130	.0146	-.0008	4.42	4.33	709.
12.32	.00	-.0228	.0142	-.0008	4.44	4.31	709.
16.37	.00	-.0357	.0126	-.0003	4.44	4.35	709.
.17	-.00	.0035	.0152	-.0017	4.43	4.35	707.

α	β	C_m	C_n	C_l	P_{r_L}	P_{r_R}	P_t
M= 1.700			R= 1.460				
-8.51	-.00	.0263	.0115	-.0022			708.
-4.03	-.00	.0108	.0107	-.0020			706.
-.07	-.00	.0029	.0111	-.0017			708.
3.97	.00	-.0051	.0112	-.0016			707.
8.04	.00	-.0135	.0106	-.0013			709.
12.15	.00	-.0230	.0103	-.0012			706.
16.10	.00	-.0345	.0095	-.0013			705.
18.07	.00	-.0439	.0092	-.0008			706.
-.08	-.00	.0032	.0115	-.0017			704.
M= 1.699			R= 1.464				
-8.84	-.00	.0265	.0101	-.0021	5.24		707.
-4.10	-.00	.0108	.0102	-.0017	5.17		708.
-.14	-.00	.0029	.0105	-.0016	5.22		709.
3.97	.00	-.0052	.0113	-.0015	5.2[illegible]		709.
8.14	.00	-.0137	.0108	-.0012	5.14		708.
12.16	.00	-.0231	.0101	-.0012	5.23		708.
16.12	.00	-.0343	.0096	-.0010	5.21		708.
18.08	.00	-.0435	.0092	-.0004	5.21		707.
-.17	-.00	.0032	.0115	-.0016	5.24		708.
M= 1.690			R= 1.43[illegible]				
-8.8[illegible]	-.00	.0208	.0105	-.0013	5.2[illegible]	5.05	707.
-4.10	-.00	.0112	.0106	-.0017	5.2[illegible]	5.05	707.
-.0[illegible]	-.00	.0040	.0108	-.0015	5.2[illegible]	5.05	707.
4.06	.00	-.0048	.0106	-.0012	5.17	5.15	707.
8.03	.00	-.0136	.0103	-.0004	5.20	5.08	708.
12.0[illegible]	.00	-.0230	.0096	-.000[illegible]	5.20	5.09	708.
16.13	.00	-.0342	.0093	-.0007	5.20	5.09	708.
18.05	.00	-.0432	.0088	-.0006	5.20	5.08	709.
-.08	-.00	.0032	.0111	-.0016	5.24	5.12	709.

δ_u = -20° δ_l = 35° δ_r = -10°   Span L = 0.615   Span R = 0.925 δ_t = 15°   Nozzle no. 1   Gas   Air

M = .611   R = 1.232

α	β	C_m	C_n	C_l	Pr_L	Pr_R	P_t
-9.22	.00	.0341	-.0003	-.0002			711.
-4.40	.00	.0307	-.0000	.0000			711.
-.39	.00	.0282	-.0002	.0002			710.
3.61	.00	.0257	-.0001	.0003			710.
7.63	.00	.0236	.0000	.0015			709.
11.66	.00	.0198	-.0010	.0019			709.
15.67	.00	.0166	-.0013	.0027			709.
18.69	.00	.0162	-.0014	.0031			709.
-.37	.00	.0283	.0002	.0006			709.

M = .609   R = 1.224

α	β	C_m	C_n	C_l	Pr_L	Pr_R	P_t
-9.22	.00	.0334	-.0016	-.0002	1.57		709.
-4.39	.00	.0297	-.0005	-.0003	1.57		709.
-.39	.00	.0270	-.0004	.0005	1.57		709.
3.65	.00	.0217	-.0006	.0015	1.56		709.
7.62	.00	.0160	-.0012	.0024	1.61		709.
11.64	.00	.0151	-.0014	.0031	1.57		709.
15.65	.00	.0150	-.0013	.0031	1.57		709.
18.53	.00	.0165	-.0006	.0026	1.57		709.
-.39	.00	.0271	-.0006	.0005	1.57		709.

M = .607   R = 1.227

α	β	C_m	C_n	C_l	Pr_L	Pr_R	P_t
-9.17	.00	.0350	-.0004	.0001	1.57	1.54	709.
-4.40	.00	.0304	-.0006	.0006	1.57	1.54	709.
-.39	.00	.0278	-.0001	.0010	1.56	1.54	709.
3.61	.00	.0220	-.0007	.0025	1.57	1.54	709.
7.64	.00	.0191	-.0009	.0032	1.57	1.54	709.
11.64	.00	.0159	-.0014	.0035	1.57	1.54	709.
15.65	.00	.0147	-.0006	.0032	1.57	1.54	709.
18.51	.00	.0166	-.0004	.0023	1.57	1.54	709.
-.37	.00	.0279	.0001	.0010	1.58	1.55	709.

M = .806   R = 1.442

α	β	C_m	C_n	C_l	Pr_L	Pr_R	P_t
-8.46	.00	.0356	-.0002	-.0001			709.
-4.13	.00	.0333	-.0007	.0002			708.
-.12	.00	.0260	-.0008	.0006			708.
3.96	.00	.0230	-.0002	.0008			708.
8.01	.00	.0190	-.0027	.0018			709.
12.01	.00	.0131	.0002	.0016			709.
16.06	.00	.0135	.0013	.0014			709.
18.93	.01	.0170	.0022	.0014			709.
-.10	.00	.0280	.0000	.0007			709.

M = .806   R = 1.447

α	β	C_m	C_n	C_l	Pr_L	Pr_R	P_t
-8.17	.00	.0350	.0003	-.0018	1.61		710.
-4.13	.00	.0321	-.0011	.0002	1.61		709.
-.11	.00	.0264	-.0014	.0010	1.62		708.
3.92	.00	.0202	-.0004	.0012	1.6[illegible]		708.
7.98	.00	.0157	-.0035	.0026	1.6[illegible]		708.
12.02	.00	.0103	-.0006	.0022	1.6[illegible]		709.
16.04	.00	.0126	.0014	.0014	1.6[illegible]		709.
18.97	.01	.0169	.0016	.0012	1.63		710.
-.11	.00	.0263	-.0005	.0009	1.62		709.

M = .806   R = 1.446

α	β	C_m	C_n	C_l	Pr_L	Pr_R	P_t
-8.32	.00	.0362	.0012	-.0002	1.61	1.58	710.
-4.11	.00	.0331	-.0003	.0006	1.62	1.58	710.
-.11	.00	.0277	-.0010	.0017	1.62	1.58	708.
3.92	.00	.0212	-.0004	.0018	1.62	1.58	708.
7.96	.00	.0168	-.0033	.0031	1.62	1.58	708.
12.02	.00	.0113	-.0003	.0026	1.62	1.58	708.
16.06	.00	.0136	.0016	.0017	1.62	1.58	708.
18.97	.00	.0178	.0021	.0019	1.61	1.58	709.
-.11	.00	.0276	-.0004	.0016	1.62	1.59	709.

M = .899   R = 1.498

α	β	C_m	C_n	C_l	Pr_L	Pr_R	P_t
-8.61	.00	.0319	-.0005	.0000			702.
-3.92	.00	.0240	.0000	-.0001			702.
.08	.00	.0202	.0005	-.0001			701.
4.12	.00	.0166	.0066	-.0019			702.
8.16	.00	.0188	.0011	.0010			702.
12.22	.00	.0081	.0007	.0012			702.
16.30	.01	.0040	.0002	.0014			703.
19.16	.01	-.0018	.0005	.0036			702.
.08	.00	.0201	.0009	-.0001			703.

M = .901   R = 1.499

α	β	C_m	C_n	C_l	Pr_L	Pr_R	P_t
-8.70	.00	.0325	.0015	-.0019	2.93		703.
-3.95	.00	.0279	.0015	-.0019	2.92		702.
.09	.00	.0263	.0029	-.0023	2.93		702.
4.12	.00	.0222	.0072	-.0029	2.93		702.
8.18	.00	.0178	.0017	.0002	2.94		702.
12.23	.00	.0082	.0003	.0007	2.92		703.
16.28	.01	.0073	.0007	.0007	2.92		703.
19.19	.01	-.0038	-.0001	.0019	3.01		703.
.09	.00	.0239	.0043	-.0023	2.94		702.

M = .902   R = 1.502

α	β	C_m	C_n	C_l	Pr_L	Pr_R	P_t
-8.60	.00	.0361	.0011	-.0004	2.92	2.87	704.
-3.93	.00	.0325	.0001	-.0013	2.92	2.87	703.
.08	.00	.0285	.0020	-.0004	2.93	2.88	703.
4.12	.00	.0240	.0076	-.0021	2.92	2.87	702.
8.17	.00	.0184	.0005	.0020	2.91	2.87	702.
12.21	.00	.0101	.0006	.0013	2.92	2.88	703.
16.30	.01	.0085	-.0006	.0015	2.92	2.87	703.
19.31	.01	.0049	-.0005	.0013	2.90	2.86	703.
.07	.00	.0297	.0014	-.0004	2.90	2.86	702.

M = 1.101   R = 1.572

α	β	C_m	C_n	C_l	Pr_L	Pr_R	P_t
-8.54	.00	.0411	.0006	.0001			706.
-3.68	.00	.0286	-.0005	.0002			702.
.41	.00	.0155	-.0003	.0005			706.
4.42	.00	.0037	.0001	.0008			707.
8.50	.00	-.0035	.0007	.0006			705.
12.55	.00	-.0091	.0005	.0008			707.
16.61	.00	-.0176	.0010	.0006			706.
19.56	.01	-.0273	.0016	.0008			706.
.37	.00	.0168	.0000	.0005			704.

M = 1.101   R = 1.587

α	β	C_m	C_n	C_l	Pr_L	Pr_R	P_t
-8.52	.00	.0405	-.0000	.0002	3.90		710.
-3.67	.00	.0279	-.0013	.0004	3.94		705.
.39	.00	.0157	-.0010	.0003	3.96		707.
4.42	.00	.0038	-.0002	.0008	3.96		706.
8.49	.00	-.0031	.0001	.0006	3.90		709.
12.55	.00	-.0110	.0003	.0008	3.92		709.
16.59	.00	-.0196	.0004	.0009	3.90		709.
19.53	.01	-.0280	.0017	.0012	3.92		708.
.38	.00	.0167	-.0007	.0005	3.91		706.

M = 1.093   R = 1.578

α	β	C_m	C_n	C_l	Pr_L	Pr_R	P_t
-8.49	.00	.0415	-.0004	.0014	3.87	3.82	706.
-3.63	.00	.0291	-.0036	.0021	3.91	3.86	707.
.39	.00	.0174	-.0014	.0023	3.94	3.88	705.
4.42	.00	.0056	-.0015	.0014	3.90	3.83	710.
8.47	.00	-.0021	-.0017	.0019	3.85	3.80	709.
12.55	.00	-.0092	-.0008	.0018	3.84	3.82	709.
16.58	.01	-.0178	-.0003	.0018	3.86	3.81	707.
19.52	.01	-.0277	.0004	.0018	3.91	3.86	712.
.41	.00	.0169	-.0035	.0024	3.93	3.88	710.

$\delta_u = -20°$ $\delta_l = 25°$ $\delta_r = 0$ Span L = 0.615 Span R = 0.925 $\delta_t = 15°$ Nozzle no. 1 Gas Air

M = 1.301 R = 1.576

α	β	C_m	C_n	C_l	P_{r_L}	P_{r_R}	P_t
[illegible]	.00	.0368	-.0004	.0004			706.
-3.72	.00	.0281	-.0005	.0004			707.
.12	.00	.0207	.0002	.0005			707.
4.17	.00	.0129	.0011	.0007			707.
8.22	.00	.0055	.0015	.0006			708.
12.31	.01	-.0037	.0017	.0004			708.
16.36	.01	-.0166	.0017	.0007			708.
19.43	.01	-.0268	.0015	.0006			707.
.13	.00	.0212	.0002	.0006			707.

M = 1.300 R = 1.578

α	β	C_m	C_n	C_l	P_{r_L}	P_{r_R}	P_t
[illegible]	.00	.0362	-.0007	.0005	4.38		707.
-3.92	.00	.0277	-.0013	.0006	4.39		707.
.12	.00	.0208	-.0005	.0005	4.37		707.
4.17	.00	.0131	.0004	.0003	4.42		708.
8.24	.00	.0053	.0014	.0005	4.41		707.
12.29	.01	-.0040	.0015	.0007	4.41		707.
16.39	.01	-.0165	.0016	.0009	4.40		707.
19.33	.01	-.0272	.0013	.0007	4.38		707.
.14	.00	.0210	-.0003	.0007	4.40		707.

M = 1.298 R = 1.573

α	β	C_m	C_n	C_l	P_{r_L}	P_{r_R}	P_t
-8.70	.00	.0371	-.0004	.0010	4.33	4.32	707.
-3.72	.00	.0282	-.0017	.0011	4.40	4.33	707.
.15	.00	.0209	-.0007	.0009	4.41	4.34	707.
4.17	.00	.0133	-.0003	.0007	4.40	4.33	707.
8.24	.00	.0055	.0002	.0012	4.39	4.33	707.
12.31	.00	-.0039	.0008	.0011	4.39	4.33	707.
16.35	.01	-.0161	.0007	.0013	4.34	4.33	708.
19.31	.01	-.0261	.0013	.0011	4.39	4.33	707.
.15	.00	.0213	-.0005	.0004	4.37	4.33	707.

M = 1.703 R = 1.455

α	β	C_m	C_n	C_l	P_{r_L}	P_{r_R}	P_t
-8.66	.00	.0401	-.0011	-.0000			707.
-4.04	.00	.0214	-.0009	.0000			707.
-.06	.00	.0145	-.0001	.0000			707.
3.99	.00	.0075	.0007	.0000			707.
8.02	.00	-.0000	.0017	-.0001			707.
12.08	.00	-.0084	.0019	-.0002			706.
16.13	.01	-.0184	.0021	-.0002			707.
19.11	.01	-.0269	.0022	-.0001			708.
-.06	.00	.0148	.0004	-.0000			707.

M = 1.701 R = 1.449

α	β	C_m	C_n	C_l	P_{r_L}	P_{r_R}	P_t
[illegible]	.00	.0292	-.0012	-.0002	5.10		709.
-4.10	.00	.0215	-.0009	-.0001	5.11		706.
-.05	.00	.0150	-.0002	-.0002	5.04		704.
3.93	.00	.0080	.0009	-.0002	5.17		705.
8.03	.00	.0001	.0014	-.0001	5.13		707.
12.08	.00	-.0080	.0017	-.0004	5.21		707.
16.14	.00	-.0180	.0019	-.0003	5.27		708.
19.02	.01	-.0263	.0022	-.0001	5.27		707.
-.04	.00	.0154	.0000	-.0003	5.19		707.

M = 1.699 R = 1.441

α	β	C_m	C_n	C_l	P_{r_L}	P_{r_R}	P_t
-8.91	.00	.0301	-.0009	-.0001	5.19	5.09	707.
-4.11	.00	.0219	-.0010	-.0001	5.15	5.07	707.
-.06	.00	.0154	-.0003	-.0002	5.17	5.09	708.
3.99	.00	.0065	-.0001	.0002	5.16	5.09	708.
8.04	.00	.0003	.0009	.0002	5.18	5.09	708.
12.07	.00	-.0078	.0009	.0000	5.19	5.12	708.
16.14	.00	-.0176	.0020	-.0001	5.26	5.14	708.
19.04	.01	-.0261	.0021	.0000	5.16	5.07	708.
-.07	.00	.0155	-.0002	-.0001	5.20	5.12	707.

$\delta_u = -10°$ $\delta_l = 25°$ $\delta_r = 0$ Span L = 0.615 Span R = 0.925 $\delta_t = 15°$ Nozzle no. 1 Gas Air

M = .607 R = 1.209

α	β	C_m	C_n	C_l	P_{r_L}	P_{r_R}	P_t
-9.20	.00	.0008	.0013	.0008			709.
-4.38	.00	-.0011	.0006	.0014			709.
-.38	.00	-.0029	.0010	.0017			709.
3.67	.00	-.0078	.0016	.0019			709.
7.69	.00	-.0124	.0017	.0026			709.
11.67	.00	-.0172	.0007	.0032			709.
15.72	.00	-.0191	.0004	.0034			709.
18.42	.00	-.0200	.0001	.0037			709.
-.38	.00	-.0028	.0006	.0019			709.

M = .609 R = 1.213

α	β	C_m	C_n	C_l	P_{r_L}	P_{r_R}	P_t
-9.12	-.00	.0002	.0018	-.0002	1.57		709.
-4.34	.00	-.0015	.0008	.0006	1.57		709.
-.40	.00	-.0055	.0003	.0021	1.56		709.
3.65	.00	-.0121	.0003	.0030	1.58		709.
7.6[illegible]	.00	-.0171	.0004	.0036	1.58		709.
11.68	.00	-.0216	-.0001	.0038	1.58		709.
15.71	.00	-.0215	-.0003	.0037	1.57		709.
18.53	.00	-.0193	.0002	.0032	1.57		709.
-.32	.00	-.0057	.0002	.0020	1.57		709.

M = .607 R = 1.212

α	β	C_m	C_n	C_l	P_{r_L}	P_{r_R}	P_t
-9.13	-.00	.0014	.0022	.0003	1.57	1.54	709.
-4.38	.00	-.0010	.0014	.0009	1.57	1.54	709.
-.38	.00	-.0060	.0002	.0026	1.57	1.54	709.
3.63	.00	-.0118	.0008	.0030	1.57	1.54	709.
7.63	.00	-.0167	.0008	.0039	1.57	1.54	709.
11.65	.00	-.0212	.0006	.0039	1.57	1.54	709.
15.69	.00	-.0216	-.0003	.0043	1.57	1.54	709.
18.54	.00	-.0191	.0002	.0034	1.57	1.54	710.
-.35	.00	-.0062	.0003	.0027	1.57	1.54	709.

M = .804 R = 1.421

α	β	C_m	C_n	C_l	P_{r_L}	P_{r_R}	P_t
-8.95	.00	-.0091	-.0020	.0012			708.
-4.13	.00	-.0047	.0017	.0004			706.
-.09	.00	-.0090	.0015	.0012			707.
3.98	.00	-.0165	.0011	.0012			706.
7.95	.00	-.0221	.0024	.0008			705.
7.95	.00	-.0221	.0024	.0008			705.
12.00	.00	-.0268	.0015	.0020			709.
16.09	.00	-.0251	.0029	.0019			711.
19.00	.00	-.0211	.0027	.0016			710.
-.04	.00	-.0095	.0018	.0012			710.

M = .806 R = 1.433

α	β	C_m	C_n	C_l	P_{r_L}	P_{r_R}	P_t
-8.92	-.00	-.0069	.0058	-.0017	1.63		711.
-4.12	-.00	-.0047	.0028	-.0007	1.63		710.
-.08	.00	-.0099	.0014	.0008	1.62		710.
3.95	.00	-.0202	.0008	.0016	1.62		710.
8.00	.00	-.0266	.0011	.0020	1.62		710.
12.06	.00	-.0302	-.0000	.0030	1.61		711.
16.06	.00	-.0253	.0015	.0017	1.62		710.
18.97	.01	-.0208	.0025	.0013	1.62		710.
-.08	.00	-.0101	.0016	.0009	1.62		709.

M = .807 R = 1.436

α	β	C_m	C_n	C_l	P_{r_L}	P_{r_R}	P_t
-8.89	-.00	-.0058	.0056	-.0010	1.62	1.57	710.
-4.11	.00	-.0036	.0024	.0002	1.62	1.57	709.
-.08	.00	-.0086	.0006	.0014	1.62	1.58	709.
3.96	.00	-.0189	.0003	.0025	1.61	1.57	709.
8.00	.00	-.0255	.0015	.0024	1.62	1.57	709.
12.04	.00	-.0291	-.0003	.0032	1.62	1.57	710.
16.07	.00	-.0245	.0001	.0025	1.61	1.57	710.
18.99	.01	-.0194	.0020	.0016	1.62	1.57	710.
-.09	.00	-.0086	.0006	.0018	1.62	1.57	709.

δ_u = -10° δ_l = 25° δ_r = 0   Span L = 0.615   Span R = 0.925 δ_t = 15°   Nozzle no. 1   Gas   Air

M= .903   K= 1.480

α	β	C_m	C_n	C_l	Pr_L	Pr_R	P_t
-8.76	-.00	-.0189	-.0021	.0019			703.
-3.91	.00	-.0147	.0002	.0008			702.
.14	.00	-.0141	.0006	.0012			702.
4.14	-.00	-.0077	.0111	-.0025			702.
8.20	.00	-.0122	.0054	.0001			704.
12.19	.00	-.0206	.0028	.0016			704.
16.28	.01	-.0261	.0017	.0014			703.
19.24	.01	-.0321	.0008	.0021			703.
.13	.00	-.0161	.0004	.0016			704.

M= .895   K= 1.477

α	β	C_m	C_n	C_l	Pr_L	Pr_R	P_t
-8.79	-.00	-.0132	-.0011	.0000	2.90		703.
-3.92	.00	-.0113	.0067	-.0006	2.91		704.
.10	.00	-.0124	.0040	-.0015	2.91		699.
4.13	-.00	-.0042	.0135	-.0045	2.91		702.
8.10	.00	-.0107	.0065	-.0013	2.92		703.
12.24	.00	-.0199	.0018	.0026	2.92		700.
16.27	.01	-.0238	.0015	.0008	2.95		701.
19.33	.01	-.0294	.0016	.0010	2.95		699.
.15	.00	-.0100	.0037	-.0010	2.94		700.

M= .904   K= 1.483

α	β	C_m	C_n	C_l	Pr_L	Pr_R	P_t
-8.76	-.00	-.0111	-.0031	.0011	2.92	2.87	703.
-3.93	.00	-.0078	-.0029	.0016	2.90	2.85	703.
.13	.00	-.0069	.0011	.0002	2.91	2.86	702.
4.16	-.00	-.0025	.0159	-.0050	2.91	2.86	702.
8.19	.00	-.0120	.0045	-.0001	2.91	2.86	703.
12.24	.00	-.0189	-.0001	.0020	2.90	2.85	703.
16.30	.01	-.0232	.0001	.0017	2.90	2.85	702.
19.19	.01	-.0283	.0009	.0012	2.91	2.85	701.
.18	.00	-.0068	.0012	.0006	2.90	2.85	700.

M= 1.102   K= 1.561

α	β	C_m	C_n	C_l	Pr_L	Pr_R	P_t
-8.49	-.00	.0098	.0004	.0004			708.
-3.67	-.00	.0003	-.0000	.0009			707.
.36	.00	-.0093	.0001	.0011			707.
4.44	.00	-.0204	.0003	.0012			708.
8.50	.00	-.0273	.0013	.0009			709.
12.58	.00	-.0327	.0009	.0011			709.
16.62	.01	-.0385	.0009	.0012			709.
19.51	.01	-.0451	.0018	.0013			709.
.41	.00	-.0100	.0006	.0011			709.

M= 1.101   K= 1.580

α	β	C_m	C_n	C_l	Pr_L	Pr_R	P_t
-8.41	-.00	.0088	.0001	.0005	3.86		715.
-3.66	.00	.0003	-.0007	.0009	3.90		707.
.40	.00	-.0095	-.0006	.0010	3.91		706.
4.45	.00	-.0208	.0006	.0011	3.90		711.
8.50	.00	-.0277	.0014	.0010	3.90		709.
12.57	.00	-.0334	.0010	.0014	3.90		709.
16.61	.01	-.0402	.0013	.0016	3.89		708.
19.50	.01	-.0466	.0021	.0016	3.93		709.
.40	.00	-.0098	-.0005	.0012	3.92		709.

M= 1.100   K= 1.569

α	β	C_m	C_n	C_l	Pr_L	Pr_R	P_t
-8.50	-.00	.0100	-.0012	.0013	3.86	3.79	709.
-3.66	.00	.0012	-.0027	.0017	3.88	3.80	706.
.38	.00	-.0084	-.0026	.0022	3.90	3.82	708.
4.48	.00	-.0197	-.0018	.0021	3.91	3.83	709.
8.51	.00	-.0271	-.0011	.0020	3.87	3.80	709.
12.56	.00	-.0325	-.0009	.0024	3.87	3.80	709.
16.61	.00	-.0393	-.0000	.0023	3.86	3.79	708.
19.59	.01	-.0459	.0014	.0022	3.86	3.79	709.
.38	.00	-.0089	-.0021	.0021	3.89	3.83	709.

M= 1.297   K= 1.562

α	β	C_m	C_n	C_l	Pr_L	Pr_R	P_t
-8.78	.00	.0104	-.0006	.0007			707.
-3.89	.00	.0081	.0009	.0006			709.
.18	.00	.0018	-.0004	.0011			702.
4.20	.00	-.0057	.0015	.0009			708.
8.26	.00	-.0124	.0024	.0009			707.
12.29	.00	-.0201	.0023	.0009			708.
16.37	.01	-.0311	.0020	.0010			708.
19.29	.01	-.0393	.0019	.0011			708.
.16	.00	.0013	.0010	.0009			707.

M= 1.301   K= 1.567

α	β	C_m	C_n	C_l	Pr_L	Pr_R	P_t
-8.77	.00	.0125	-.0002	.0007	4.35		708.
-3.92	.00	.0066	-.0003	.0006	4.37		708.
.12	.00	.0011	.0000	.0010	4.37		708.
4.18	.00	-.0055	.0011	.0009	4.37		707.
8.26	.00	-.0126	.0023	.0008	4.37		708.
12.32	.01	-.0207	.0020	.0012	4.37		707.
16.38	.01	-.0311	.0014	.0013	4.37		707.
19.31	.01	-.0390	.0017	.0013	4.37		707.
.14	.00	.0013	.0003	.0009	4.37		707.

M= 1.303   K= 1.566

α	β	C_m	C_n	C_l	Pr_L	Pr_R	P_t
-8.77	.00	.0130	-.0010	.0011	4.38	4.31	708.
-3.92	.00	.0069	-.0013	.0013	4.38	4.31	707.
.15	.00	.0016	-.0006	.0016	4.38	4.33	707.
4.21	.00	-.0053	-.0004	.0014	4.38	4.33	707.
8.25	.00	-.0123	.0005	.0015	4.37	4.29	707.
12.31	.01	-.0203	.0011	.0016	4.37	4.29	708.
16.39	.01	-.0306	.0014	.0017	4.38	4.31	708.
19.25	.01	-.0387	.0015	.0016	4.38	4.31	708.
.15	.00	.0017	-.0007	.0014	4.38	4.31	708.

M= 1.699   K= 1.440

α	β	C_m	C_n	C_l	Pr_L	Pr_R	P_t
-8.35	.00	.0117	-.0009	.0008			707.
-4.09	.00	.0068	-.0003	.0005			709.
-.05	.00	.0016	.0002	.0009			709.
3.98	.00	-.0037	.0012	.0007			709.
8.01	.00	-.0107	.0018	.0004			708.
12.09	.00	-.0183	.0022	.0004			707.
16.15	.01	-.0270	.0020	.0007			707.
19.06	.01	-.0346	.0021	.0009			707.
-.05	.00	.0020	.0013	.0007			706.

M= 1.704   K= 1.430

α	β	C_m	C_n	C_l	Pr_L	Pr_R	P_t
-8.85	.00	.0111	-.0002	.0001	5.21		709.
-4.09	.00	.0068	-.0000	.0002	5.14		709.
-.06	.00	.0026	.0002	.0003	5.13		709.
3.49	.00	-.0033	.0013	.0004	5.10		708.
8.05	.00	-.0107	.0020	.0004	5.02		707.
12.07	.00	-.0181	.0021	.0004	5.14		707.
16.15	.01	-.0268	.0022	.0006	5.16		707.
18.37	.01	-.0324	.0022	.0009	5.15		707.
-.05	.00	.0027	.0006	.0004	5.17		708.

M= 1.703   K= 1.423

α	β	C_m	C_n	C_l	Pr_L	Pr_R	P_t
-8.47	.00	.0114	-.0004	.0005	5.20	5.07	707.
-4.10	.00	.0073	-.0003	.0004	5.18	5.08	707.
-.06	.00	.0029	.0000	.0005	5.22	5.09	709.
3.98	.00	-.0030	.0008	.0005	5.21	5.10	708.
8.06	.00	-.0109	.0014	.0007	5.13	5.03	708.
12.08	.00	-.0177	.0016	.0007	5.12	5.03	708.
16.19	.01	-.0266	.0021	.0007	5.12	5.03	708.
19.03	.01	-.0337	.0020	.0009	5.15	5.04	708.
-.07	.00	.0030	.0002	.0005	5.18	5.07	706.

δ_u = -10° δ_l = 25° δ_r = 0 Span L = 0.925 Span R = 0.925 δ_t = 0 Nozzle no. 1 Gas Air

M= .607 R= 1.195

α	β	C_m	C_n	C_l	P_{r_L}	P_{r_R}	P_t
-9.01	.00	.0007	-.0005	.0003			707.
-4.36	.00	-.0009	-.0010	.0007			709.
-.36	.00	-.0030	-.0010	.0014			707.
3.66	.00	-.0078	-.0004	.0011			709.
7.65	.00	-.0123	-.0003	.0020			708.
11.63	.00	-.0170	-.0010	.0023			707.
15.68	.00	-.0193	-.0015	.0031			709.
18.52	.00	-.0201	-.0019	.0036			710.
-.36	.00	-.0028	-.0010	.0012			707.

M= .611 R= 1.203

α	β	C_m	C_n	C_l	P_{r_L}	P_{r_R}	P_t
-9.18	.00	-.0021	-.0042	.0015	1.53		711.
-4.36	.00	-.0041	-.0053	.0025	1.53		709.
-.39	.00	-.0066	-.0052	.0032	1.53		708.
3.63	.00	-.0113	-.0044	.0033	1.54		708.
7.67	.00	-.0162	-.0044	.0040	1.59		708.
11.67	.00	-.0212	-.0055	.0045	1.54		708.
15.69	.00	-.0232	-.0066	.0054	1.53		709.
18.65	.00	-.0243	-.0067	.0054	1.53		709.
-.34	.00	-.0063	-.0044	.0030	1.53		709.

M= .607 R= 1.201

α	β	C_m	C_n	C_l	P_{r_L}	P_{r_R}	P_t
-9.13	.00	.0001	-.0042	.0028	1.54	1.55	709.
-4.38	.00	-.0026	-.0045	.0034	1.54	1.55	709.
-.37	.00	-.0053	-.0055	.0047	1.49	1.55	709.
3.66	.00	-.0097	-.0049	.0041	1.54	1.56	709.
7.70	.00	-.0143	-.0053	.0052	1.59	1.56	709.
11.65	.00	-.0192	-.0054	.0054	1.58	1.55	709.
15.67	.00	-.0214	-.0072	.0063	1.54	1.55	709.
18.52	.00	-.0233	-.0074	.0065	1.54	1.55	707.
-.37	.00	-.0052	-.0055	.0039	1.60	1.56	712.

M= .808 R= 1.427

α	β	C_m	C_n	C_l	P_{r_L}	P_{r_R}	P_t
-8.86	-.00	-.0105	-.0016	.0003			709.
-4.11	.00	-.0052	.0001	-.0001			708.
-.07	.00	-.0096	.0002	.0007			715.
3.96	.00	-.0167	.0006	.0003			706.
7.98	.00	-.0224	.0010	.0008			710.
12.05	.00	-.0271	.0001	.0019			713.
16.08	.00	-.0252	.0006	.0016			706.
18.97	.01	-.0217	.0015	.0014			708.
-.10	.00	-.0075	.0001	.0010			709.

M= .806 R= 1.619

α	β	C_m	C_n	C_l	P_{r_L}	P_{r_R}	P_t
-8.96	-.00	-.0104	.0012	.0000	1.74		708.
-4.12	.00	-.0069	-.0029	.0013	1.42		712.
-.05	.00	-.0121	-.0036	.0022	1.44		707.
4.00	.00	-.0148	-.0033	.0018	1.45		713.
7.98	.00	-.0259	-.0036	.0027	1.43		708.
12.05	.01	-.0301	-.0050	.0034	1.47		711.
16.05	.01	-.0282	-.0059	.0040	1.46		710.
19.03	.01	-.0250	-.0056	.0043	1.44		709.
-.06	.00	-.0122	-.0030	.0022	1.46		708.

M= .809 R= 1.624

α	β	C_m	C_n	C_l	P_{r_L}	P_{r_R}	P_t
-8.93	-.00	-.0078	.0016	.0010	1.45	1.62	710.
-4.11	.00	-.0059	-.0032	.0022	1.56	1.63	709.
-.08	.00	-.0100	-.0048	.0033	1.47	1.65	708.
3.98	.00	-.0174	-.0050	.0038	1.49	1.66	708.
8.01	.00	-.0243	-.0061	.0036	1.47	1.64	709.
12.01	.01	-.0278	-.0061	.0046	1.66	1.64	708.
16.06	.01	-.0266	-.0071	.0050	1.73	1.70	708.
19.01	.01	-.0237	-.0066	.0050	1.75	1.73	708.
-.07	.00	-.0101	-.0046	.0035	1.73	1.71	710.

M= .899 R= 1.473

α	β	C_m	C_n	C_l	P_{r_L}	P_{r_R}	P_t
-8.78	-.00	-.0161	-.0021	.0016			702.
-3.93	-.00	-.0152	.0004	.0004			703.
.10	.00	-.0138	.0006	.0009			702.
4.13	-.00	-.0084	.0115	-.0028			702.
8.17	.00	-.0135	.0050	.0000			702.
12.25	.00	-.0213	.0020	.0009			702.
16.29	.00	-.0262	.0016	.0012			701.
19.21	.01	-.0313	.0008	.0015			701.
.10	.00	-.0139	.0007	.0011			701.

M= .899 R= 1.478

α	β	C_m	C_n	C_l	P_{r_L}	P_{r_R}	P_t
-8.78	-.00	-.0151	.0010	.0008	1.80		701.
-3.93	-.00	-.0132	.0021	-.0011	1.80		701.
.12	.00	-.0135	.0025	.0006	1.80		701.
4.13	-.00	-.0109	.0083	-.0016	1.79		702.
8.19	.00	-.0145	.0015	.0009	1.83		702.
12.25	.00	-.0228	-.0026	.0027	1.81		702.
16.28	.01	-.0293	-.0047	.0031	1.79		702.
19.24	.01	-.0344	-.0067	.0041	1.78		703.
.11	.00	-.0138	.0025	.0008	1.79		701.

M= .899 R= 1.480

α	β	C_m	C_n	C_l	P_{r_L}	P_{r_R}	P_t
-8.67	-.00	-.0132	.0012	.0012	1.81	1.76	701.
-3.92	-.00	-.0118	.0014	.0007	1.81	1.77	701.
.11	.00	-.0120	.0011	.0013	1.81	1.77	700.
4.12	-.00	-.0096	.0064	-.0065	1.80	1.76	700.
8.18	.00	-.0148	-.0008	.0024	1.80	1.76	700.
12.23	.00	-.0219	-.0043	.0039	1.90	1.76	700.
16.28	.01	-.0279	-.0058	.0044	1.73	1.76	700.
19.23	.01	-.0331	-.0080	.0048	1.79	1.75	700.
.12	.00	-.0122	.0017	.0013	1.82	1.78	699.

M= 1.105 R= 1.566

α	β	C_m	C_n	C_l	P_{r_L}	P_{r_R}	P_t
-4.42	-.00	.0096	.0007	.0002			707.
-3.64	-.00	-.0005	.0002	.0005			709.
.42	.00	-.0095	.0006	.0005			708.
4.44	.00	-.0204	.0007	.0037			709.
8.49	.00	-.0271	.0015	.0005			708.
12.54	.00	-.0314	.0012	.0008			708.
16.61	.00	-.0391	.0013	.0008			709.
19.52	.01	-.0457	.0018	.0010			709.
.45	.00	-.0096	.0008	.0007			706.

M= 1.104 R= 1.574

α	β	C_m	C_n	C_l	P_{r_L}	P_{r_R}	P_t
-8.50	-.00	.0091	-.0000	.0004	3.66		709.
-3.63	-.00	-.0020	-.0016	.0013	3.70		709.
.39	.00	-.0114	-.0019	.0016	3.67		707.
4.47	.00	-.0212	-.0019	.0018	3.65		708.
8.50	.00	-.0288	-.0010	.0014	3.45		707.
12.57	.00	-.0348	-.0017	.0018	3.64		709.
16.61	.01	-.0408	-.0018	.0021	3.62		707.
19.60	.01	-.0471	-.0014	.0023	3.66		707.
.40	.00	-.0109	-.0018	.0017	3.67		707.

M= 1.104 R= 1.575

α	β	C_m	C_n	C_l	P_{r_L}	P_{r_R}	P_t
-8.41	-.00	.0100	-.0010	.0012	3.67	3.61	709.
-3.66	-.00	-.0004	-.0033	.0021	3.70	3.66	703.
.37	.00	-.0092	-.0044	.0029	3.60	3.56	702.
4.44	.00	-.0204	-.0043	.0028	3.61	3.56	711.
8.50	.00	-.0285	-.0042	.0026	3.64	3.57	711.
12.54	.00	-.0328	-.0040	.0027	3.66	3.58	708.
16.64	.01	-.0410	-.0037	.0028	3.68	3.62	712.
19.56	.01	-.0471	-.0026	.0029	3.66	3.59	709.
.40	.00	-.0100	-.0042	.0029	3.65	3.59	707.

δ_u = -10° δ_l = 15° δ_r = 0 Span L = 0.615 Span R = 0.925 δ_t = 15° Nozzle no. 1 Gas Air

M= .607 R= 1.219

α	β	C_m	C_n	C_l	P_{r_L}	P_{r_R}	P_t
-9.20	.00	.0143	.0002	-.0004			710.
-4.37	.00	.0146	.0003	-.0006			709.
-4.40	.00	.0145	.0003	.0001			709.
-.36	.00	.0157	-.0001	.0015			709.
3.63	.00	.0129	-.0007	.0010			709.
7.65	.00	.0109	-.0005	.0011			709.
11.67	.00	.0089	-.0013	.0019			709.
15.69	.00	.0098	-.0007	.0020			709.
18.51	.00	.0089	-.0006	.0027			709.
-.34	.00	.0151	.0009	.0004			709.
-.33	.00	.0153	-.0002	.0007			709.

M= .605 R= 1.222

α	β	C_m	C_n	C_l	P_{r_L}	P_{r_R}	P_t
-9.23	.00	.0146	-.0018	.0014	1.60	1.56	708.
-4.35	.00	.0135	-.0026	.0016	1.60	1.56	708.
-.39	.00	.0134	-.0044	.0027	1.60	1.56	707.
3.63	.00	.0111	-.0043	.0029	1.59	1.56	707.
7.63	.00	.0087	-.0052	.0041	1.59	1.55	706.
11.63	.00	.0065	-.0056	.0046	1.59	1.55	706.
15.67	.00	.0062	-.0054	.0050	1.58	1.55	707.
18.52	.00	.0059	-.0052	.0051	1.59	1.55	709.
-.39	.00	.0136	-.0043	.0028	1.56	1.54	707.

M= .609 R= 1.232

α	β	C_m	C_n	C_l	P_{r_L}	P_{r_R}	P_t
-9.20	.00	.0120	-.0017	.0004	1.60		709.
-4.39	.00	.0116	-.0026	.0009	1.59		709.
-.38	.00	.0119	-.0036	.0017	1.58		708.
3.63	.00	.0095	-.0040	.0018	1.57		708.
7.67	.00	.0070	-.0047	.0031	1.57		709.
11.64	.00	.0049	-.0050	.0035	1.58		709.
15.66	.00	.0049	-.0049	.0043	1.57		708.
18.45	.00	.0043	-.0047	.0044	1.57		707.
-.37	.00	.0119	-.0036	.0020	1.57		707.

M= .800 R= 1.423

α	β	C_m	C_n	C_l	P_{r_L}	P_{r_R}	P_t
-8.86	.00	.0053	-.0003	.0007			705.
-4.12	.00	.0093	-.0027	.0014			706.
-.08	.00	.0108	-.0006	.0010			709.
3.93	.00	.0087	-.0011	.0011			708.
7.99	.00	.0059	.0004	.0008			707.
12.00	.00	.0049	.0006	.0015			708.
16.06	.00	.0095	.0006	.0014			708.
18.90	.01	.0147	.0013	.0014			708.
-.12	.00	.0119	-.0001	.0005			704.
11.93	.00	.0049	.0011	.0010			707.

M= .805 R= 1.433

α	β	C_m	C_n	C_l	P_{r_L}	P_{r_R}	P_t
-8.85	-.00	.0065	.0025	-.0009	1.62		710.
-4.12	.00	.0069	-.0018	.0004	1.63		709.
-.10	.00	.0095	-.0025	.0010	1.61		709.
3.94	.00	.0056	-.0043	.0019	1.65		709.
7.98	.00	.0031	-.0032	.0016	1.63		708.
12.02	.00	.0019	-.0037	.0026	1.62		709.
16.06	.01	.0064	-.0038	.0027	1.61		709.
18.95	.01	.0114	-.0036	.0028	1.60		710.
-.09	.00	.0091	-.0023	.0010	1.65		709.

M= .805 R= 1.437

α	β	C_m	C_n	C_l	P_{r_L}	P_{r_R}	P_t
-8.42	-.00	.0089	.0025	-.0001	1.64	1.59	709.
-4.12	.00	.0115	-.0030	.0014	1.62	1.59	709.
-.08	.00	.0119	-.0046	.0025	1.63	1.59	709.
3.94	.00	.0081	-.0056	.0027	1.62	1.58	708.
7.99	.00	.0050	-.0034	.0025	1.63	1.59	709.
12.01	.00	.0037	-.0040	.0030	1.62	1.58	709.
16.06	.01	.0087	-.0057	.0037	1.62	1.59	709.
18.76	.01	.0126	-.0046	.0038	1.62	1.57	709.
-.10	.00	.0121	-.0040	.0024	1.62	1.58	709.
7.98	.00	.0062	.0006	.0001			709.
16.08	.00	.0096	.0007	.0009			709.
7.99	.00	.0050	-.0040	.0027	1.61	1.57	708.
16.06	.01	.0089	-.0051	.0036	1.61	1.57	708.
16.04	.01	.0060	-.0054	.0035	1.61	1.57	709.

δ_u = -20° δ_l = 15° δ_r = 0 Span L = 0.925 Span R = 0.925 δ_t = 0 Nozzle no. 1 Gas Air

M= .608 R= 1.195

α	β	C_m	C_n	C_l	P_{r_L}	P_{r_R}	P_t
-9.19	.00	.0142	-.0006	.0014			710.
-4.39	.00	.0144	-.0007	.0017			710.
-.36	.00	.0153	-.0009	.0023			710.
3.63	.00	.0131	-.0014	.0024		-.37	709.
7.61	.00	.0111	-.0013	.0034			708.
11.62	.00	.0092	-.0015	.0026			709.
15.67	.00	.0094	-.0007	.0035			712.
18.49	.00	.0092	-.0002	.0037			710.
-.37	.00	.0154	-.0006	.0024			712.

M= .608 R= 1.204

α	β	C_m	C_n	C_l	P_{r_L}	P_{r_R}	P_t
-9.18	.00	.0094	-.0012	.0019	1.60		711.
-4.39	.00	.0092	-.0020	.0026	1.59		709.
-.38	.00	.0094	-.0023	.0033	1.59		709.
3.64	.00	.0069	-.0023	.0040	1.58		710.
7.65	.00	.0044	-.0025	.0044	1.59		709.
11.67	.00	.0016	-.0030	.0048	1.58		709.
15.70	.00	-.0001	-.0030	.0061	1.57		709.
18.55	.00	-.0003	-.0029	.0065	1.60		709.
-.38	.00	.0094	-.0021	.0035	1.60		709.

M= .608 R= 1.198

α	β	C_m	C_n	C_l	P_{r_L}	P_{r_R}	P_t
-9.17	.00	.0104	-.0008	.0022	1.60	1.65	709.
-4.40	.00	.0100	-.0013	.0028	1.60	1.65	709.
-.36	.00	.0100	-.0024	.0038	1.59	1.65	709.
3.61	.00	.0075	-.0020	.0040	1.57	1.65	709.
7.65	.00	.0045	-.0023	.0050	1.59	1.65	709.
11.64	.00	.0019	-.0025	.0053	1.59	1.65	709.
15.66	.00	.0007	-.0029	.0061	1.59	1.65	709.
18.52	.00	.0001	-.0029	.0069	1.53	1.64	709.

M= .805 R= 1.415

α	β	C_m	C_n	C_l	P_{r_L}	P_{r_R}	P_t
-8.94	.00	.0050	-.0008	.0005			708.
-4.12	.00	.0085	-.0026	.0012			708.
-.10	.00	.0112	-.0010	.0013			706.
3.93	.00	.0087	-.0014	.0014			708.
7.98	.00	.0062	.0003	.0010			711.
12.03	.00	.0053	.0007	.0014			710.
16.06	.00	.0104	.0011	.0013			708.
19.01	.01	.0150	.0015	.0015			708.
-.11	.00	.0104	-.0008	.0014			709.

M= .805 R= 1.414

α	β	C_m	C_n	C_l	P_{r_L}	P_{r_R}	P_t
-8.97	-.00	.0057	.0040	-.0006	1.64		709.
-4.11	.00	.0067	.0010	.0004	1.63		709.
-.09	.00	.0077	-.0013	.0012	1.66		708.
3.93	.00	.0038	-.0024	.0023	1.66		708.
7.98	.00	.0012	-.0012	.0023	1.67		707.
10.49	.00	-.0007	-.0008	.0028	1.66		708.
16.04	.01	.0036	-.0021	.0037	1.65		709.
18.92	.01	.0084	-.0017	.0042	1.64		709.
-.08	.00	.0060	-.0011	.0022	1.66		710.

M= .808 R= 1.418

α	β	C_m	C_n	C_l	P_{r_L}	P_{r_R}	P_t
-8.43	-.00	.0068	.0037	.0003	1.66	1.67	709.
-4.12	.00	.0100	.0003	.0016	1.67	1.70	708.
-.11	.00	.0099	-.0025	.0033	1.66	1.69	707.
3.95	.00	.0048	-.0026	.0033	1.66	1.68	708.
7.97	.00	.0021	-.0009	.0029	1.64	1.66	712.
12.01	.01	.0009	-.0016	.0040	1.65	1.67	712.
16.04	.01	.0055	-.0028	.0046	1.64	1.66	710.
18.94	.01	.0093	-.0018	.0046	1.64	1.65	710.
-.06	.00	.0098	-.0022	.0034	1.67	1.70	706.

δ_u = -10° δ_l = 25° δ_r = 0 Span L = 0.925 Span R = 0.925 δ_t = 0 Nozzle no. 1 Gas Air

α	β	C_m	C_n	C_l	Pr_L	Pr_R	P_t
	M= 1.302			[illegible]= 1.566			
-8.03	.00	.0126	.0003	.0004			707.
-3.92	.00	.0068	.0005	.0005			707.
.13	.00	.0014	.0009	.0007			707.
4.20	.00	-.0055	.0017	.0007			707.
8.23	.00	-.0124	.0021	.0006			707.
12.30	.00	-.0265	.0022	.0008			706.
16.37	.01	-.0309	.0020	.0009			706.
19.35	.01	-.0391	.0015	.0008			706.
.17	.00	.0014	.0011	.0006			707.
	M= 1.300			[illegible]= 1.567			
-8.73	-.00	.0127	-.0002	.0005	4.41		707.
-3.92	.00	.0063	-.0006	.0009	4.40		707.
.12	.00	.0005	-.0007	.0013	4.37		707.
4.17	.00	-.0064	-.0002	.0014	4.35		707.
8.25	.00	-.0134	.0005	.0014	4.42		707.
12.30	.01	-.0215	.0004	.0014	4.39		707.
16.37	.01	-.0320	.0002	.0017	4.47		707.
19.25	.01	-.0399	-.0001	.0015	4.41		707.
.17	.00	.0006	-.0007	.0013	4.39		704.
	M= 1.298			[illegible]= 1.566			
-8.74	.00	.0136	-.0014	.0013	4.33	4.31	706.
-3.92	.00	.0067	-.0020	.0014	4.38	4.31	707.
.14	.00	.0010	-.0017	.0019	4.34	4.30	706.
4.19	.00	-.0062	-.0020	.0020	4.37	4.30	707.
8.25	.00	-.0131	-.0016	.0020	4.42	4.36	705.
12.32	.01	-.0214	-.0007	.0017	4.39	4.32	705.
16.37	.01	-.0316	-.0004	.0019	4.38	4.31	706.
19.31	.01	-.0396	-.0008	.0018	4.39	4.31	706.
.12	.00	.0012	-.0017	.0020	4.37	4.31	705.

α	β	C_m	C_n	C_l	Pr_L	Pr_R	P_t
	M= 1.702			[illegible]= 1.452			
-8.56	.00	.0118	-.0008	.0004			707.
-4.11	.00	.0067	-.0004	.0005			707.
-4.11	.00	.0069	-.0004	.0003			707.
-.08	.00	.0013	.0002	.0005			707.
4.01	.00	-.0037	.0013	.0003			707.
8.04	.00	-.0106	.0019	.0001			707.
12.11	.00	-.0182	.0021	.0001			707.
16.12	.00	-.0267	.0021	.0001			707.
19.16	.01	-.0351	.0024	.0004			707.
-.04	.00	.0021	.0015	.0003			707.
	M= 1.699			[illegible]= 1.439			
-8.57	.00	.0120	-.0000	.0002	5.12		707.
-4.10	.00	.0067	.0002	.0003	5.12		707.
-.04	.00	.0016	.0007	.0004	5.22		707.
3.99	.00	-.0041	.0015	.0004	5.16		707.
8.04	.00	-.0109	.0019	.0002	5.12		707.
12.09	.00	-.0185	.0018	.0002	5.14		707.
16.12	.01	-.0274	.0016	.0007	5.14		707.
19.02	.01	-.0347	.0009	.0004	5.11		707.
-.06	.00	.0018	.0005	.0003	5.18		706.
	M= 1.698			[illegible]= 1.430			
-8.65	.00	.0124	.0003	.0004	5.16	5.03	706.
-4.10	.00	.0070	.0005	.0005	5.15	5.03	706.
-.06	.00	.0019	.0002	.0007	5.18	5.06	706.
3.97	.00	-.0047	.0010	.0008	5.23	5.11	706.
8.06	.00	-.0107	.0011	.0007	5.21	5.11	706.
12.05	.00	-.0192	.0008	.0008	5.14	5.06	706.
16.11	.00	-.0272	.0006	.0009	5.16	5.07	706.
19.08	.01	-.0345	.0007	.0011	5.16	5.04	706.
-.06	.00	.0020	.0005	.0007	5.13	5.05	707.

$\delta_u = -20°$ $\delta_l = 35°$ $\delta_r = 0$ Span L = 0.615 Span R = 0.925 $\delta_t = 0$ Nozzle no. 2 Gas CO_2

M= .606 R= 1.184

α	β	C_m	C_n	C_l	Pr_L	Pr_R	P_t
-9.18	.00	.0222	.0007	-.0001			709.
-4.39	.00	.0178	.0007	.0001			709.
-.38	.00	.0127	.0007	.0004			709.
3.6[illegible]	.00	.0081	.0003	.0008			709.
7.6[illegible]	.00	.0042	.0005	.0015			708.
11.66	.00	.0028	-.0010	.0022			707.
15.6[illegible]	.00	-.0003	-.0011	.0030			709.
18.43	.00	-.0047	-.0005	.0037			709.
-.41	.00	.0126	.0013	.0004			708.

M= .605 R= 1.181

α	β	C_m	C_n	C_l	Pr_L	Pr_R	P_t
-9.18	-.00	.0172	-.0002	.0005	1.53		707.
-4.40	.00	.0120	-.0004	.0007	1.54		706.
-.40	.00	.0076	-.0004	.0013	1.51		707.
3.64	.00	.0039	-.0005	.0017	1.53		707.
7.64	.00	.0007	-.0015	.0024	1.54		708.
11.67	.00	-.0027	-.0024	.0031	1.54		708.
15.67	.00	-.0052	-.0021	.0036	1.55		707.
18.65	.00	-.0064	-.0016	.0043	1.54		709.
-.38	.00	.0077	.0004	.0051	1.54		709.

M= .608 R= 1.183

α	β	C_m	C_n	C_l	Pr_L	Pr_R	P_t
-9.19	-.00	.0190	.0010	.0008	1.65	1.69	709.
-4.39	.00	.0133	.0005	.0014	1.65	1.69	709.
-.38	.00	.0092	.0004	.0019	1.65	1.69	707.
3.64	.00	.0053	-.0004	.0022	1.66	1.69	710.
7.64	.00	.0018	-.0009	.0028	1.66	1.69	709.
11.66	.00	-.0019	-.0015	.0036	1.67	1.69	707.
15.71	.00	-.0044	-.0013	.0045	1.67	1.69	708.
18.58	.00	-.0061	-.0010	.0044	1.67	1.69	709.
-.33	.00	.0091	.0007	.0019	1.67	1.69	709.

M= .607 R= 1.187

α	β	C_m	C_n	C_l	Pr_L	Pr_R	P_t
-9.17	-.00	.0203	.0010	.0001	.36	.96	707.
-4.37	.00	.0150	.0009	.0006	.34	.95	709.
-.36	.00	.0109	.0008	.0010	.34	.95	709.
3.62	.00	.0069	.0006	.0016	.34	.95	709.
7.68	.00	.0035	-.0001	.0023	.34	.95	707.
11.63	.00	-.0000	-.0012	.0026	.34	.95	708.
15.69	.00	-.0029	-.0007	.0036	.34	.95	709.
18.63	.00	-.0033	-.0006	.0038	.34	.95	709.
-.36	.00	.0108	.0013	.0011	.34	.95	709.
-.36	.00	.0109	.0013	.0011	.33	.95	709.

M= .607 R= 1.188

α	β	C_m	C_n	C_l	Pr_L	Pr_R	P_t
-9.17	.00	.0214	.0008	-.0002	.48	.50	707.
-4.38	.00	.0171	.0010	.0000	.48	.50	709.
-.40	.00	.0124	.0012	.0002	.48	.50	709.
3.63	.00	.0087	.0007	.0008	.48	.50	709.
7.69	.00	.0057	.0005	.0016	.49	.50	709.
11.63	.00	.0020	-.0008	.0026	.49	.50	711.
15.70	.00	-.0010	-.0006	.0031	.49	.50	709.
18.65	.00	-.0014	-.0004	.0034	.49	.50	707.
-.37	.00	.0125	.0017	.0003	.49	.50	709.

M= .607 R= 1.189

α	β	C_m	C_n	C_l	Pr_L	Pr_R	P_t
-.37	.00	.0128	.0014	-.0001			707.
-.36	.00	.0127	.0017	.0001	.18	.19	710.
-.36	.00	.0129	.0017	.0001	.30	.31	709.
-.36	.00	.0124	.0017	.0006	.50	.50	708.
-.36	.00	.0111	.0013	.0011	.92	.92	709.
-.36	.00	.0103	.0009	.0016	1.10	1.11	709.

M= .81[illegible] R= 1.19[illegible]

α	β	C_m	C_n	C_l	Pr_L	Pr_R	P_t
3.62	.00	.0042	.0008	.0036			707.
3.62	.00	.0041	.0004	.0036	.15	.05	707.
3.62	.00	.0042	.0013	.0046	.32	.32	708.
3.62	.00	.0087	.0010	.0034	.53	.59	707.
3.63	.00	.0070	.0004	.0017	.82	.84	707.
3.64	.00	.0065	.0008	.0020	1.10	1.06	707.

M= .805 R= 1.3[illegible]

α	β	C_m	C_n	C_l	Pr_L	Pr_R	P_t
-8.47	.00	.0214	-.0011	.0004			706.
-4.12	.00	.0173	-.0001	.0006			707.
-.07	.00	.0115	.0004	.0010			708.
3.95	.00	.0043	.0012	.0006			707.
7.97	.00	-.0003	-.0023	.0024			706.
12.02	.00	-.0065	.0010	.0020			708.
16.05	.00	-.0066	.0011	.0021			708.
18.92	.01	-.0036	.0014	.0024			709.
-.09	.00	.0106	.0006	.0011			707.

M= .806 R= 1.39[illegible]

α	β	C_m	C_n	C_l	Pr_L	Pr_R	P_t
-8.88	.00	.0205	-.0007	.0002	1.61		709.
-4.13	.00	.0157	-.0002	.0004	1.61		706.
-.08	.00	.0078	-.0000	.0017	1.5[illegible]		707.
3.97	.00	.0007	.0005	.0017	1.5[illegible]		709.
7.99	.00	-.0039	-.0023	.0032	1.51		709.
12.03	.00	-.0098	-.0001	.0027	1.6[illegible]		710.
16.05	.00	-.0090	.0004	.0026	1.61		709.
18.95	.00	-.0058	.0011	.0027	1.61		708.
-.09	.00	.0079	.0004	.0016	1.62		709.

M= .805 R= 1.399

α	β	C_m	C_n	C_l	Pr_L	Pr_R	P_t
-8.47	.00	.0220	.0003	.0007	1.62	1.65	709.
-4.13	.00	.0170	.0006	.0011	1.62	1.65	708.
-.07	.00	.0091	.0006	.0022	1.63	1.65	710.
3.99	.00	.0021	.0005	.0021	1.64	1.66	708.
7.98	.00	-.0024	-.0030	.0037	1.64	1.65	708.
12.02	.00	-.0085	.0006	.0029	1.63	1.65	707.
16.06	.00	-.0085	.0010	.0027	1.64	1.65	708.
18.95	.00	-.0050	.0012	.0030	1.64	1.65	709.
-.08	.00	.0094	.0007	.0021	1.62	1.65	709.

M= .809 R= 1.406

α	β	C_m	C_n	C_l	Pr_L	Pr_R	P_t
-8.46	.00	.0219	-.0006	.0001	.78	.78	710.
-4.12	.00	.0170	.0001	.0007	.78	.78	708.
-.07	.00	.0100	.0004	.0009	.78	.78	708.
3.96	.00	.0039	.0004	.0015	.78	.78	709.
7.97	.00	-.0007	-.0024	.0028	.78	.78	708.
12.00	.00	-.0071	.0010	.0027	.78	.78	708.
16.06	.00	-.0069	.0014	.0019	.78	.78	708.
19.00	.00	-.0038	.0019	.0023	.77	.78	709.
-.08	.00	.0102	.0011	.0011	.77	.78	708.

α	P	C_m	C_N	C_T	P_{r_L}	P_{r_R}	P_t	α	P	C_m	C_N	C_T	P_{r_L}	P_{r_R}	P_t
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

δ_u = -20° δ_l = 35° δ_F = 0 Span L = 0.015 Span R = 0.025 δ_t = 0 Nozzle no. 2 Gas CO_2

α	β	C_m	C_n	C_l	P_{r_L}	P_{r_R}	P_t
[illegible]				[illegible]			
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]			[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]			[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]			[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]			[illegible]
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[illegible]	[illegible]	[illegible]	[illegible]	[illegible]			[illegible]
12.30	[illegible]	[illegible]	[illegible]	[illegible]			[illegible]
16.38	[illegible]	[illegible]	[illegible]	[illegible]			[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]			[illegible]
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12.30	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
16.38	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
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α	β	C_m	C_n	C_l	P_{r_L}	P_{r_R}	P_t
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[illegible]	[illegible]	[illegible]	[illegible]	[illegible]			[illegible]
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$\delta_u = -20°$ $\delta_l = 35°$ $\delta_r = 0$ Span L = 0.925 Span R = 0.925 $\delta_t = 0$ Nozzle no. 2 Gas CO_2

M = .60? R = 1.19?

α	β	C_m	C_n	C_l	P_{R_L}	P_{R_R}	R_t
-8.[illegible]	[illegible]	.0215	[illegible]	.0015			708.
-4.3[illegible]	[illegible]	.0169	[illegible]	[illegible]			708.
-.4[illegible]	[illegible]	.0127	.0005	[illegible]			708.
3.56	[illegible]	.0084	.0005	.0025			708.
7.57	[illegible]	.0058	-.0002	.0027			707.
11.53	[illegible]	.0025	-.0003	[illegible]			708.
15.56	[illegible]	-.0064	-.0006	.0037			707.
-.60	[illegible]	.0127	.0010	.0017			708.
18.52	[illegible]	-.0011	-.0005	[illegible]			708.

M = .607 R = 1.1[illegible]

α	β	C_m	C_n	C_l	P_{R_L}	P_{R_R}	R_t
-8.15	[illegible]	.0143	[illegible]	[illegible]	1.57		7[illegible]
-4.38	[illegible]	.0144	-.0041	[illegible]	1.57		7[illegible]
-.33	[illegible]	.0111	-.0041	[illegible]	1.57		7[illegible]
3.61	[illegible]	.0060	[illegible]	[illegible]	1.57		7[illegible]
7.59	[illegible]	.0039	[illegible]	[illegible]	1.57		7[illegible]
11.57	[illegible]	-.0006	[illegible]	[illegible]	1.57		7[illegible]
15.58	[illegible]	-.0035	-.0061	[illegible]	1.57		7[illegible]
18.5[illegible]	[illegible]	-.0042	[illegible]	[illegible]	1.57		7[illegible]
-.5[illegible]	[illegible]	.0101	[illegible]	.0041	1.57		7[illegible]

M = .608 R = 1.19[illegible]

α	β	C_m	C_n	C_l	P_{R_L}	P_{R_R}	R_t
-8.15	[illegible]	.0226	-.0034	.0036	1.57	1.57	7[illegible]
-4.60	.01	.0175	[illegible]	.0038	1.57	1.57	7[illegible]
-.38	.01	.0120	-.0064	.0044	1.57	1.57	7[illegible]
3.57	.01	.0086	[illegible]	.0064	1.57	1.57	7[illegible]
7.58	.01	.0052	-.0055	.0058	1.57	1.57	7[illegible]
11.58	.00	.0017	-.0062	[illegible]	1.57	1.57	7[illegible]
15.60	.00	-.0016	-.0066	.0071	1.57	1.57	7[illegible]
18.53	.01	-.0027	-.0067	.0077	1.57	1.57	7[illegible]
-.60	.00	.0121	-.0037	.0066	1.57	1.57	7[illegible]

M = .609 R = 1.202

α	β	C_m	C_n	C_l	P_{R_L}	P_{R_R}	R_t
-.37	.00	.0127	.0008	.0019			709.
-.39	.00	.0126	-.0003	.0022	.32	.32	709.
-.39	.00	.0125	-.0009	.0023	.48	.48	709.
-.39	.00	.0123	-.0019	.0029	.83	.83	709.
-.38	.00	.0122	-.0026	.0036	1.38	1.08	709.
-.39	.00	.0121	-.0041	.0046	.16	.16	709.

M = .802 R = 1.46[illegible]

α	β	C_m	C_n	C_l	P_{R_L}	P_{R_R}	R_t
-8.07	[illegible]	.0210	-.0006	.0006			707.
-4.11	[illegible]	.0173	-.000[illegible]	.0004			707.
-.10	[illegible]	.0108	.0004	.0011			706.
3.95	[illegible]	.0067	.0006	.0014			706.
7.99	[illegible]	-.0003	-.0025	.0026			706.
12.02	[illegible]	-.0056	.0015	.0015			707.
16.04	[illegible]	-.0061	.0013	.0020			707.
18.92	[illegible]	-.0089	.0016	.0021			707.
-.06	[illegible]	.0106	.0008	.0009			708.

M = .805 R = 1.46[illegible]

α	β	C_m	C_n	C_l	P_{R_L}	P_{R_R}	R_t
-8.32	[illegible]	.0201	[illegible]	.0012	1.4[illegible]		7[illegible]
-4.12	[illegible]	.0153	[illegible]	.0017	1.4[illegible]		7[illegible]
-.07	[illegible]	.0109	[illegible]	.0023	1.4[illegible]		7[illegible]
3.9[illegible]	[illegible]	.0024	-.0036	.0024	1.4[illegible]		7[illegible]
7.99	[illegible]	-.0026	[illegible]	.0040	1.4[illegible]		7[illegible]
12.01	[illegible]	-.0046	-.0063	.0038	1.41		7[illegible]
16.0[illegible]	.01	-.0057	-.0066	.0042	1.42		7[illegible]
19.09	.01	-.0063	[illegible]	.0044	1.42		7[illegible]
-.05	[illegible]	.0087	-.0092	.004[illegible]	1.4[illegible]		7[illegible]

M = .807 R = 1.41[illegible]

α	β	C_m	C_n	C_l	P_{R_L}	P_{R_R}	R_t
-8.05	[illegible]	.0225	-.0025	.0042	1.41	1.45	708.
-4.11	[illegible]	.0140	-.0027	.0045	1.41	1.44	708.
-.0[illegible]	[illegible]	.0118	-.0038	.0046	1.4[illegible]	1.44	708.
4.[illegible]	[illegible]	.0044	-.0036	.0035	1.41	1.45	710.
8.0[illegible]	[illegible]	-.0009	-.0058	.0044	1.41	1.44	710.
12.0[illegible]	[illegible]	-.0077	-.0064	.0045	1.41	1.45	710.
16.09	.01	-.0063	-.0061	.0043	1.58	1.42	708.
19.02	.01	-.0061	-.0068	.0045	1.5[illegible]	1.53	708.
-.0[illegible]	.00	.0112	-.0030	.0044	1.5[illegible]	1.61	710.

$\delta_u = -20°$ $\delta_l = 35°$ $\delta_r = 0$ Span L = 0.925 Span R = 0.925 $\delta_t = 0$ Nozzle no. 2 Gas CO_2

α	β	C_m	C_n	C_l	P_{r_L}	P_{r_R}	P_t
[illegible]							
.11	[illegible]	[illegible]	[illegible]	[illegible]			[illegible]
[illegible]							
.13	[illegible]	[illegible]	[illegible]	[illegible]			[illegible]
[illegible]							
.11	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]
[illegible]							
.11	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]
[illegible]							
.11	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]							
.13	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

α	β	C_m	C_n	C_l	P_{r_L}	P_{r_R}	P_t
[illegible]							
[illegible]							
[illegible]							
[illegible]							

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$\delta_W = -20°$ $\delta_1 = 35°$ $\delta_F = 0$ Span L = 0.615   Span R = 0.925 $\delta_R = 15°$ Nozzle no. 1   Gas   Air

M = [illegible]   R = [illegible]

α	β	C_m	C_n	C_l	Pc_L	Pc_R	R_e
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]			[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]			[illegible]
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[illegible]	[illegible]	[illegible]	[illegible]	[illegible]			[illegible]

M = [illegible]   R = [illegible]

α	β	C_m	C_n	C_l	Pc_L	Pc_R	R_e
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]
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M = [illegible]   R = [illegible]

α	β	C_m	C_n	C_l	Pc_L	Pc_R	R_e
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
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[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

M = [illegible]   R = [illegible]

α	β	C_m	C_n	C_l	Pc_L	Pc_R	R_e
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]			[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

M = [illegible]   R = [illegible]

α	β	C_m	C_n	C_l	Pc_L	Pc_R	R_e
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]			[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]			[illegible]

M = [illegible]   R = [illegible]

α	β	C_m	C_n	C_l	Pc_L	Pc_R	R_e
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]			[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]			[illegible]

M = [illegible]   R = [illegible]

α	β	C_m	C_n	C_l	Pc_L	Pc_R	R_e
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]			[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]			[illegible]

M = [illegible]   R = [illegible]

α	β	C_m	C_n	C_l	Pc_L	Pc_R	R_e
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]			[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]			[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]			[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]			[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]			[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]			[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]			[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]			[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]			[illegible]

M = [illegible]   R = [illegible]

α	β	C_m	C_n	C_l	Pc_L	Pc_R	R_e
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]

M = [illegible]   R = [illegible]

α	β	C_m	C_n	C_l	Pc_L	Pc_R	R_e
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

$\delta_u = -20°$ $\delta_l = 35°$ $\delta_r = 0$ Span L = 0.615 Span R = 0.925 $\delta_t = 15°$ Nozzle no. 1 Gas Air

M = .497 R = 1.4?1

α	β	C_m	C_n	C_l	Pr_L	Pr_R	P_t
-8.3	.0?	.0177	.0002	.0001			703.
-3.3	.00	.0067	-.0015	.0006			703.
.10	[illegible]	-.0028	-.0007	.0001			703.
4.11	[illegible]	-.0071	.0006	.0004			703.
8.13	.00	-.0139	.0023	.0016			703.
12.??	[illegible]	-.0238	.0016	.0014			704.
16.17	[illegible]	-.0282	.0017	.0016			704.
18.?7	[illegible]	-.0324	.0008	.0018			703.
[illegible]	[illegible]	.0011	-.0006	.0014			701.

M = .901 R = 1.4?6

α	β	C_m	C_n	C_l	Pr_L	Pr_R	P_t
-8.?6	[illegible]	.0162	.0002	.0001	1.4?		702.
-3.??	[illegible]	.0068	-.0013	.0006	1.4?		697.
.07	[illegible]	-.0036	-.0010	.0002	1.4?		698.
4.13	[illegible]	[illegible]	.0004	.0007	1.4?		701.
8.11	[illegible]	-.0116	.0013	.0026	1.4?		705.
12.15	[illegible]	-.0244	.0013	.0013	1.4?		709.
16.??	[illegible]	-.0324	.0016	.0016	1.4?		708.
18.??	[illegible]	-.0395	.0019	.0016	1.4?		706.
.01	[illegible]	-.0032	-.0008	.0002	1.4?		703.

M = .903 R = 1.4?6

α	β	C_m	C_n	C_l	Pr_L	Pr_R	P_t
-8.?6	.0?	.0176	.0011	.0006	1.36	1.28	701.
-3.?3	[illegible]	.0073	-.0020	.0017	1.36	1.27	701.
.0?	[illegible]	-.0030	-.0028	.0014	1.36	1.28	702.
4.11	[illegible]	-.0061	.0006	.0016	1.34	1.30	703.
8.13	[illegible]	-.0147	.0010	.0024	1.34	1.3?	702.
12.12	[illegible]	-.0204	.0006	.0027	1.34	1.3?	701.
16.??	[illegible]	-.0265	.0007	.0023	1.34	1.30	701.
18.13	[illegible]	-.0292	-.0004	.0024	1.34	1.29	700.
.0?	[illegible]	.0069	-.0025	.0016	1.34	1.29	703.

M = .906 R = 1.52?

α	β	C_m	C_n	C_l	Pr_L	Pr_R	P_t
.09	.0?	-.0063	-.0006	-.0006			703.
.08	[illegible]	-.0025	-.0014	-.0006	.71		702.
.08	.0?	-.0035	-.0017	-.0004	1.56		702.
.08	[illegible]	-.0036	-.0021	-.0007	3.??		702.
.09	[illegible]	-.0023	-.0031	-.0005	5.61		703.
.09	[illegible]	-.0074	-.0066	.0006	9.16		704.
.09	[illegible]	-.0032	-.0004	-.0008			703.

M = .901 R = 1.525

α	β	C_m	C_n	C_l	Pr_L	Pr_R	P_t
.08	.0?	-.0044	-.0011	-.0001			702.
.09	.00	-.0032	-.0014	.0001		.67	702.
.09	.00	-.0050	-.0014	-.0000		.69	702.
.09	.0?	-.0036	-.0024	.0007		1.35	701.
.09	.0?	.0014	-.0036	.0012		2.86	701.
.09	.00	.0030	-.0043	.0025		5.10	701.
.08	.0?	.0045	-.0066	.0038		8.55	701.

M = .900 R = 1.521

α	β	C_m	C_n	C_l	Pr_L	Pr_R	P_t
.09	.00	-.0033	-.0011	-.0004			701.
.09	.00	-.0028	-.0011	-.0003			702.
.08	.0?	-.0021	-.0024	.0001	.71	.61	704.
.08	.0?	-.0005	-.0036	.0008	1.52	1.37	706.
.07	.0?	.0010	-.0045	.0016	3.??	2.81	706.
.07	.0?	.0065	-.0060	.0026	5.61	5.06	703.
.08	.0?	.0038	-.0086	.0063	9.13	8.66	703.
.08	.0?	-.0039	-.0013	-.0003			702.

M = 1.101 R = 1.?67

α	β	C_m	C_n	C_l	Pr_L	Pr_R	P_t
-8.56	.0?	.0165	.0030	-.000?			707.
-3.?4	-.0?	.0061	.0034	-.0006			708.
.36	.0?	-.0072	.0025	.000?			708.
4.47	.0?	-.0170	.001?	.0011			705.
8.44	.00	-.0244	.002?	.0010			707.
12.42	.0?	-.024?	.001?	.0013			706.
16.??	.0?	-.0394	.000?	.0014			710.
1?.45	.01	-.04??	.001?	.0014			710.
.36	.0?	-.00??	.002?	.000?			706.

M = 1.106 R = 1.557

α	β	C_m	C_n	C_l	Pr_L	Pr_R	P_t
-8.62	.0?	.0161	.0033	-.000?	1.7?		711.
-3.?7	.0?	.0068	.0035	-.0002	1.6?		710.
.37	.0?	-.0064	.0026	.000?	1.7?		710.
4.41	.0?	-.0161	.0016	.0012	1.71		709.
8.41	.0?	-.0256	.0022	.0011	1.70		707.
12.42	.00	-.0293	.0016	.001?	1.6?		705.
16.56	.0?	-.0602	.0014	.0016	1.6?		707.
1?.??	.01	-.0461	.0021	.0013	1.6?		707.
.39	.0?	-.0069	.0027	.000?	1.71		711.

M = 1.095 R = 1.55?

α	β	C_m	C_n	C_l	Pr_L	Pr_R	P_t
-8.53	.0?	.0167	.0036	-.0002	1.6?	1.55	709.
-3.65	.0?	.0062	.003?	.000?	1.70	1.57	707.
.37	.0?	-.0063	.0017	.0011	1.71	1.54	705.
4.42	.0?	-.0176	.0014	.0015	1.6?	1.56	706.
8.40	.0?	-.0265	.0012	.0017	1.67	1.56	706.
12.44	.0?	-.0301	.001?	.0016	1.71	1.58	706.
16.51	.01	-.0391	.0010	.0016	1.70	1.57	709.
1?.36	.01	-.0496	.0013	.0017	1.71	1.58	713.
.38	.0?	-.0066	.0020	.0010	1.73	1.5?	712.

M = 1.046 R = 1.637

α	β	C_m	C_n	C_l	Pr_L	Pr_R	P_t
.38	-.00	-.0274	.0020	.0001			709.
.37	-.0?	-.0075	.0024	-.0001			709.
.37	-.00	-.0073	.0021	.0000	.66		709.
.37	-.00	-.0086	.0019	.0000	1.43		709.
.38	-.00	-.0083	.0016	.0003	3.76		709.
.38	-.0?	-.0100	.0004	.0005	6.73		709.
.37	-.0?	-.0074	.0021	-.0001	11.43		709.

M = 1.038 R = 1.62?

α	β	C_m	C_n	C_l	Pr_L	Pr_R	P_t
.38	-.00	-.0075	.0021	-.0001			708.
.37	-.00	-.0074	.0019	.0000	.91	.78	707.
.37	-.00	-.0074	.0016	.0003	1.88	1.67	707.
.37	-.00	-.0069	-.0007	.0015	3.8?	3.55	707.
.37	-.00	-.0045	-.0076	.0049	6.76	6.33	707.
.35	.00	-.0029	-.0128	.0078	11.41	10.72	707.
.38	-.00	-.0083	.0021	-.0000			707.
							710.

M = 1.120 R = 1.636

α	β	C_m	C_n	C_l	Pr_L	Pr_R	P_t
.38	-.00	-.0084	.0020	.0000			710.
.38	-.00	-.0081	.0020	-.0001		.82	709.
.38	-.00	-.0076	.0017	.0002		1.69	708.
.37	-.00	-.0066	.0000	.0015		3.53	707.
.37	-.00	-.0036	-.0059	.0066		6.38	707.
.37	.00	-.0013	-.0101	.0067		10.72	707.
.38	-.00	-.0075	.0023	-.0001			707.

δ_u = -80° δ_l = 35° δ_r = 0   Span L = 0.615   Span R = 0.925 δ_t = 15°   Nozzle no. 1   Gas Air

[illegible] = 1.298   [illegible] = 1.467

α	β	C_m	C_n	C_l	Pt_L	Pt_R	T_t
-8.07	.00	.0249	.0007	.0001			706.
-3.96	.00	.0152	.0022	-.0001			709.
.11	.00	.0050	.0021	.0005			706.
4.13	.00	-.0060	.0023	.0009			709.
8.16	.00	-.0118	.0026	.0009			707.
12.21	.01	-.0223	.0025	.0011			706.
16.20	.01	-.0346	.0021	.0013			709.
19.23	.01	-.0451	.0011	.0012			707.
.13	.00	.0044	.0024	.0004			708.

[illegible] = 1.361   [illegible] = 1.56[illegible]

α	β	C_m	C_n	C_l	Pt_L	Pt_R	T_t
-8.08	.00	.0206	.0009	.0001	2.51		708.
-3.93	.00	.0122	.0016	.0001	2.42		708.
.11	.00	.0044	.0016	.0004	2.43		707.
4.13	.00	-.0062	.0022	.0003	2.42		707.
8.17	.00	-.0121	.0024	.0010	2.42		709.
12.19	.01	-.0222	.0023	.0012	2.42		707.
16.31	.01	-.0352	.0021	.0014	2.40		707.
19.23	.01	-.0452	.0012	.0014	2.40		707.
.14	.00	.0044	.0021	.0005	2.45		707.

[illegible] = 1.496   [illegible] = 1.566

α	β	C_m	C_n	C_l	Pt_L	Pt_R	T_t
-8.06	.00	.0219	.0004	.0002	2.43	2.43	706.
-4.02	.00	.0124	.0017	.0002	2.42	2.33	707.
.09	.00	.0065	.0018	[illegible]	2.41	2.4[illegible]	707.
4.12	.00	-.0060	.0020	.0012	2.42	2.41	706.
8.19	.00	-.0123	.0015	.0015	2.41	2.40	707.
12.18	.01	-.0221	.0019	.0016	2.42	2.40	706.
16.24	.01	-.0367	.0017	.0014	2.4[illegible]	2.40	709.
19.23	.01	-.0443	.0010	.0017	2.41	2.41	708.
.05	.00	.0096	.0021	.0004	2.45	2.45	709.

[illegible] = 1.605   [illegible] = 1.6[illegible]

α	β	C_m	C_n	C_l	Pt_L	Pt_R	T_t
-8.07	.00	.0216	-.0003	.0000			707.
-4.11	.00	.0116	.0004	-.0001			707.
-.08	.00	.0033	.0015	.0000			707.
3.96	.00	-.0048	.0020	.0009			707.
7.64	.00	-.0139	.0024	.0009			707.
11.96	.00	-.0230	.0024	.0006			707.
16.02	.01	-.0365	.0017	.0007			707.
19.05	.01	-.0443	.0015	.0011			707.
-.11	.00	.0033	.0015	.0001			707.
							708.

[illegible] = 1.701   [illegible] = 1.61[illegible]

α	β	C_m	C_n	C_l	Pt_L	Pt_R	T_t
-8.07	.00	.0202	-.0006	.0002	3.72		706.
-4.11	.00	.0112	.0003	.0001	3.7[illegible]		708.
-.10	.00	.0032	.0009	.0002	3.78		706.
3.91	.00	-.0049	.0017	.0003	3.75		705.
7.96	.00	-.0137	.0020	.0004	3.74		707.
11.98	.00	-.0233	.0019	.0006	3.71		705.
16.01	.01	-.0367	.0016	.0008	3.6[illegible]		706.
18.75	.01	-.0435	.0018	.0011	3.65		707.
-.09	.00	.0033	.0013	.0003	3.79		708.

[illegible] = 1.608   [illegible] = 1.60[illegible]

α	β	C_m	C_n	C_l	Pt_L	Pt_R	T_t
-8.09	.00	.0207	-.0005	.0003	3.7[illegible]	3.41	706.
-4.10	.00	.0112	.0006	.0004	3.71	3.38	707.
-.10	.00	.0034	.0012	.0004	3.74	3.4[illegible]	710.
3.93	.00	-.0047	.0017	.0005	3.76	3.44	707.
7.96	.00	-.0135	.0016	.0004	3.76	3.45	705.
11.98	.00	-.0231	.0017	.0006	3.62	3.56	706.
16.04	.01	-.0345	.0018	.0011	3.62	3.52	705.
18.96	.01	-.0437	.0017	.0014	3.73	3.50	707.
-.09	.00	.0037	.0016	.0005	3.81	3.51	705.

δ_u = -20° δ_l = 35° δ_r = 0   Span L = 0.615   Span R = 0.925 δ_t = 15°   Nozzle no. 2   Gas   Air

M = .810   R = 1.6[illegible]

α	β	C_m	C_n	C_l	Fr_L	Fr_R	P_t
6.13	-5.7[illegible]	.0072	-.0285	.0437			710.
6.12	-4.24	.0014	-.0207	.0324			708.
6.12	-2.27	.0065	-.0115	.0157			708.
6.12	-.72	.0016	-.0021	.0064			707.
6.13	.82	.0065	.0031	-.0070			709.
6.13	1.84	.0007	.0076	-.0161			708.
6.12	3.85	.0007	.0161	-.0302			709.
6.12	5.85	.0014	.0251	-.0467			708.
6.12	-.36	.0005	-.0025	[illegible]			707.

M = .80[illegible]   R = 1.2[illegible]

α	β	C_m	C_n	C_l	Fr_L	Fr_R	P_t
6.13	-5.81	.0011	-.0285	.0435	[illegible]		708.
6.13	-4.26	-.0001	-.0207	.0320	[illegible]		709.
6.13	-2.29	-.0012	-.0120	.0162	[illegible]		[illegible]
6.13	-1.27	-.0021	-.0077	.0086	[illegible]		709.
6.13	-.3[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		709.
6.13	.[illegible]	-.0022	.0022	-.0066	[illegible]		709.
6.13	1.84	-.0021	.0064	-.0145	[illegible]		709.
6.13	3.8[illegible]	-.0013	.0165	-.0305	[illegible]		708.
6.12	5.87	-.0008	.0251	-.0465	[illegible]		708.
6.13	-.36	-.0020	-.0034	.0017	[illegible]		709.

M = .808   R = 1.25[illegible]

α	β	C_m	C_n	C_l	Fr_L	Fr_R	P_t
6.13	-5.81	.0024	-.0283	.0437	[illegible]	[illegible]	708.
6.13	-4.25	.0004	-.0205	.0320	.47	[illegible]	709.
6.13	-2.28	-.0005	-.0122	.0174	.47	.80	710.
6.13	-1.30	-.0011	-.0073	.0090	[illegible]	.80	708.
6.13	-.31	-.0011	-.0024	.0025	[illegible]	.80	711.
6.13	.66	-.0012	.0026	-.0061	.47	.74	712.
6.14	1.65	-.0010	.0074	-.0142	.47	.79	709.
6.13	3.8[illegible]	-.0005	.0166	-.0[illegible]	[illegible]	.80	709.
6.13	5.87	.0002	.0254	-.0463	.47	.80	709.
6.13	-.31	-.0013	-.0031	.0026	.4[illegible]	.81	707.

M = .810   R = 1.66[illegible]

α	β	C_m	C_n	C_l	Fr_L	Fr_R	P_t
6.10	-5.8[illegible]	-.0019	-.0292	.0463			712.
6.10	-3.8[illegible]	-.0032	-.0213	.0307			710.
6.10	-2.05	-.0043	-.0126	.0155			711.
6.10	-1.0[illegible]	-.0042	-.0081	.0082			710.
6.10	-.0[illegible]	-.0044	-.0002	-.0004			708.
6.09	.91	-.0037	.0051	-.0065			707.
6.09	1.89	-.0031	.0121	-.0166			706.
6.09	3.84	-.0028	.0217	-.0324			705.
6.09	5.80	-.0024	.0296	-.0468			705.
6.09	-.05	-.0043	-.0004	-.0012			710.

M = .809   R = 1.648

α	β	C_m	C_n	C_l	Fr_L	Fr_R	P_t
6.10	-5.79	-.0026	-.0289	.0463	.76		710.
6.10	-3.97	-.0037	-.0209	.0304	.75		710.
6.09	-2.04	-.0047	-.0126	.0157	.75		709.
6.09	-1.04	-.0048	-.0083	.0081	.76		709.
6.09	-.07	-.0052	-.0005	-.0005	.75		710.
6.09	.91	-.0048	.0050	-.0086	.75		711.
6.10	1.90	-.0057	.0117	-.0167	.76		710.
6.09	3.84	-.0036	.0218	-.0329	.75		709.
6.09	5.82	-.0033	.0302	-.0492	.76		707.
6.09	-.07	-.0046	-.0008	-.0008	.75		705.

M = .801   R = 1.634

α	β	C_m	C_n	C_l	Fr_L	Fr_R	P_t
6.09	-5.86	-.0012	-.0286	.0463	.75	.67	706.
6.09	-3.99	-.0016	-.0205	.0305	.77	.67	705.
6.09	-2.05	-.0033	-.0124	.0151	.77	.67	705.
6.09	-1.05	-.0036	-.0059	.0077	.76	.67	706.
6.09	-.08	-.0039	-.0008	-.0004	.76	.67	707.
6.09	.91	-.0037	.0048	-.0087	.77	.67	707.
6.09	1.89	-.0040	.0123	-.0169	.76	.67	708.
6.09	3.82	-.0035	.0221	-.0327	.77	.67	708.
6.09	5.82	-.0032	.0309	-.0494	.76	.67	709.
6.09	-.0[illegible]	-.0009	-.0009	-.0005	.76	.67	710.

M = .898   R = 1.6[illegible]

α	β	C_m	C_n	C_l	Fr_L	Fr_R	P_t
6.12	-5.7[illegible]	-.0096	-.0275	.0414			701.
6.12	-3.81	-.0131	-.0196	.0272			700.
6.13	-1.8[illegible]	-.0150	-.0088	.0129			704.
6.13	-.85	-.0166	-.0037	.0063			7[illegible].
6.12	.11	-.0133	.0004	-.0014			703.
6.12	1.1[illegible]	-.0112	.0049	-.0088			701.
6.12	2.04	-.0121	.0101	-.0161			702.
6.12	4.02	-.0136	.0209	-.0311			704.
6.12	5.9[illegible]	-.0133	.0295	-.0459			706.
6.12	.10	-.0125	.0008	-.0020			702.

M = .900   R = 1.495

α	β	C_m	C_n	C_l	Fr_L	Fr_R	P_t
6.13	-5.94	-.0141	-.0282	.0427	1.2[illegible]		703.
6.13	-3.78	-.0164	-.0187	.0264	1.24		704.
6.12	-1.86	-.0154	-.0097	.0129	1.25		702.
6.12	-.45	-.0136	-.0048	.0086	1.2[illegible]		700.
6.12	.12	-.0138	.0002	-.0014	1.25		700.
6.12	1.07	-.0135	.0050	-.0087	1.24		702.
6.12	2.06	-.0114	.0101	-.0153	1.24		700.
6.12	3.96	-.0114	.0211	-.0311	1.24		699.
6.12	5.94	-.0130	.0302	-.0465	1.25		702.
6.12	.12	-.0137	.0003	-.0014	1.25		701.

M = .903   R = 1.497

α	β	C_m	C_n	C_l	Fr_L	Fr_R	P_t
6.12	-5.76	-.0124	-.0290	.0422	1.25	1.14	702.
6.13	-3.76	-.0153	-.0206	.0264	1.2[illegible]	1.14	702.
6.12	-1.84	-.0165	-.0103	.0136	1.25	1.14	702.
6.12	-.86	-.0116	-.0056	.0067	1.25	1.14	703.
6.12	.1[illegible]	-.0124	-.0007	-.0006	1.2[illegible]	1.13	703.
6.12	1.09	-.0125	.0044	-.0086	1.2[illegible]	1.14	703.
6.12	2.08	-.0123	.0091	-.0155	1.25	1.14	706.
6.12	4.06	-.0136	.0214	-.0313	1.25	1.14	702.
6.12	5.96	-.0098	.0304	-.0475	1.24	1.13	702.
6.12	.11	-.0124	-.0012	-.0011	1.25	1.14	703.

M = 1.100   R = 1.5[illegible]

α	β	C_m	C_n	C_l	Fr_L	Fr_R	P_t
6.14	-5.47	-.0193	-.0184	.0350			709.
6.14	-3.51	-.0211	-.0118	.0220			708.
6.14	-1.57	-.0217	-.0031	.0121			706.
6.14	-.61	-.0208	.0014	.0044			707.
6.14	.36	-.0209	.0047	-.0022			712.
6.14	1.35	-.0201	.0086	-.0096			710.
6.14	2.34	-.0194	.0121	-.0151			708.
6.13	4.29	-.0183	.0194	-.0279			707.
6.14	5.23	-.0169	.0267	-.0415			708.
6.14	.[illegible]	-.0208	.0054	-.0028			709.

M = 1.101   R = 1.5[illegible]

α	β	C_m	C_n	C_l	Fr_L	Fr_R	P_t
6.14	-5.44	-.0201	-.0179	.0353	1.79		709.
6.14	-3.52	-.0205	-.0114	.0227	1.79		707.
6.14	-1.58	-.0210	-.0025	.0098	1.79		706.
6.14	-.59	-.0209	.0009	.0036	1.80		707.
6.14	.38	-.0209	.0051	-.0031	1.80		707.
6.14	1.34	-.0200	.0084	-.0088	1.82		707.
6.14	2.32	-.0191	.0122	-.0156	1.81		707.
6.14	4.26	-.0183	.0200	-.0286	1.81		708.
6.13	6.21	-.0170	.0271	-.0414	1.79		707.
6.14	.41	-.0207	.0052	-.0027	1.81		707.

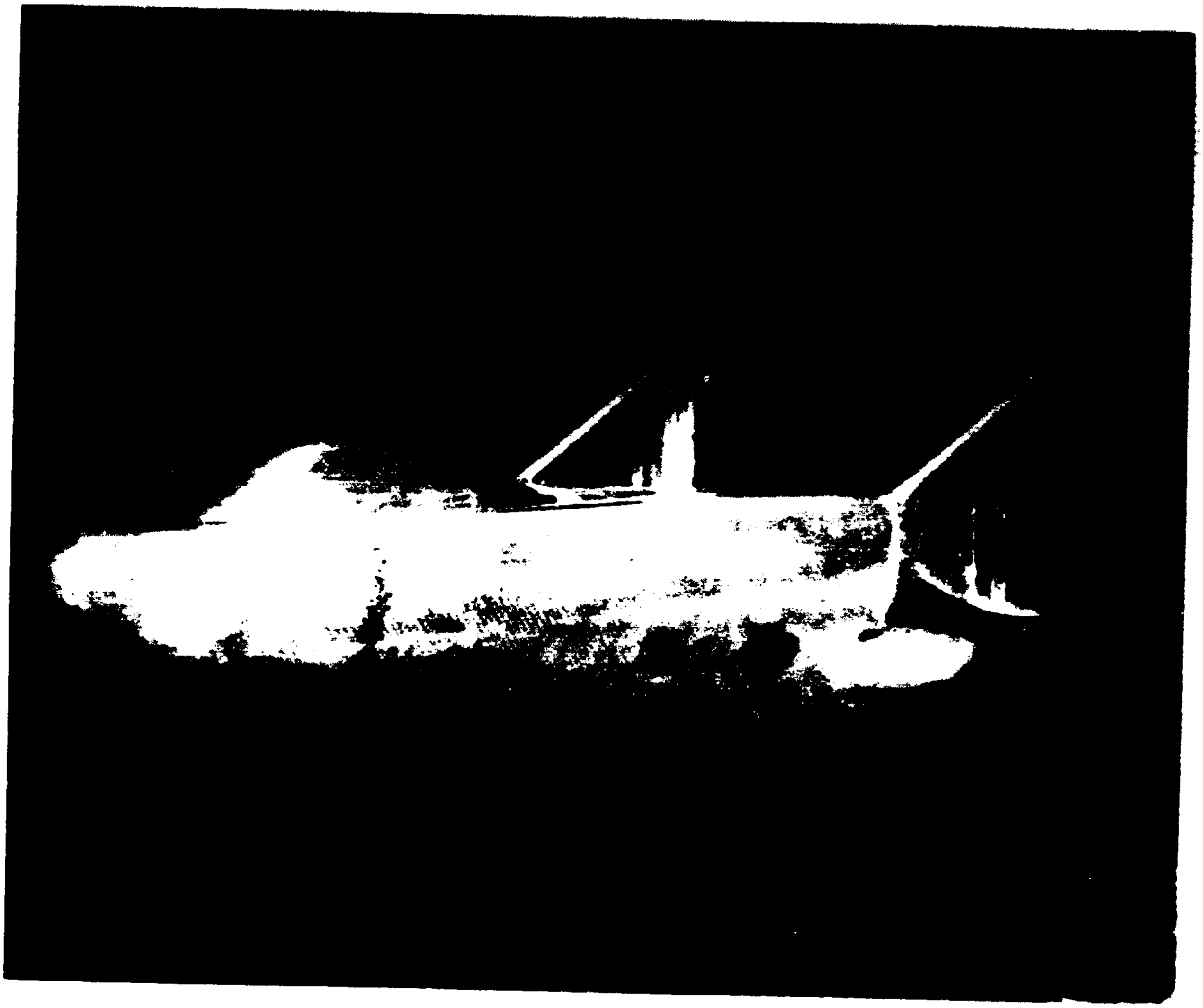
M = 1.106   R = 1.589

α	β	C_m	C_n	C_l	Fr_L	Fr_R	P_t
6.14	-5.46	-.0200	-.0181	.0363	1.82	1.64	709.
6.14	-3.55	-.0203	-.0119	.0234	1.81	1.64	706.
6.14	-1.58	-.0211	-.0037	.0107	1.81	1.64	707.
6.14	-.62	-.0214	.0000	.0046	1.81	1.64	709.
6.14	.37	-.0207	.0037	-.0016	1.81	1.64	707.
6.14	1.36	-.0198	.0073	-.0079	1.82	1.64	706.
6.14	2.32	-.0188	.0111	-.0145	1.80	1.64	706.
6.14	4.29	-.0183	.0190	-.0276	1.83	1.64	707.
6.14	6.23	-.0169	.0263	-.0409	1.80	1.63	709.
6.14	.38	-.0206	.0041	-.0018	1.81	1.63	709.

$\delta_u = -20°$ $\delta_l = 35°$ $\delta_r = 0$ Span L = 0.615 Span R = 0.925 $\delta_t = 15°$ Nozzle no. 2 Gas Air

α	β	C_m	C_n	C_l	P_{r_L}	P_{r_R}	P_t
= 1.501			= 1.57[illegible]				
6.16	-5.76	-.0090	-.0125	.0341			
6.16	-3.76	-.0117	-.0075	.0219			708.
6.15	-1.85	-.0108	-.0021	.0098			706.
6.16	-.86	-.0116	-.00[illegible]	.006[illegible]			707.
6.16	.1[illegible]	-.01[illegible]	.02[illegible]	-.001[illegible]			707.
6.16	1.0[illegible]	-.01[illegible]	.062	-.009[illegible]			707.
6.15	2.0[illegible]	-.00[illegible]	.08[illegible]	-.014[illegible]			707.
6.15	3.86	-.00[illegible]	.112	-.02[illegible]			707.
6.15	[illegible]	-.00[illegible]	.16[illegible]	-.03[illegible]			706.
6.16	.16	-.0106	.020	-.00[illegible]			707.
							707.
= 1.301			= 1.6[illegible]				
6.15	-5.76	-.01[illegible]	-.0122	.03[illegible]			
6.16	-3.76	-.010[illegible]	-.007[illegible]	.01[illegible]	[illegible]		707.
6.16	-1.86	-.0108	-.0025	.007	[illegible]		707.
6.16	-.86	-.010[illegible]	-.00[illegible]	.006	[illegible]		705.
6.16	.16	-.0106	.021	-.01[illegible]	[illegible]		706.
6.16	1.06	-.0106	.0[illegible]	-.00[illegible]	[illegible]		707.
6.15	2.06	-.0101	.06[illegible]	-.0072	[illegible]		708.
6.15	[illegible]	-.0097	.117	-.0266	[illegible]		705.
6.15	5.[illegible]	-.0098	.16[illegible]	-.036[illegible]	[illegible]		706.
6.15	.1[illegible]	-.010[illegible]	.02[illegible]	-.00[illegible]	[illegible]		707.
					[illegible]		707.
= 1.40[illegible]			= 1.57[illegible]				
6.16	-5.76	-.0112	-.012[illegible]	.03[illegible]			
6.16	-3.76	-.0109	-.008[illegible]	.02[illegible]	[illegible]	[illegible]	706.
6.16	-1.85	-.0107	-.00[illegible]	.01[illegible]	[illegible]	[illegible]	708.
6.16	-.85	-.0107	-.01[illegible]	.00[illegible]	[illegible]	[illegible]	715.
6.16	.16	-.010[illegible]	.017	-.0015	[illegible]	[illegible]	707.
6.16	1.0[illegible]	-.010[illegible]	.063	-.0077	[illegible]	[illegible]	707.
6.16	2.07	-.0099	.05[illegible]	-.013[illegible]	[illegible]	[illegible]	708.
6.15	[illegible]	-.009[illegible]	.11[illegible]	-.025[illegible]	[illegible]	[illegible]	706.
6.15	5.87	-.009[illegible]	.16[illegible]	-.0377	[illegible]	[illegible]	707.
6.16	.16	-.0111	.016	-.001[illegible]	[illegible]	[illegible]	707.
							707.

α	β	C_m	C_n	C_l	P_{r_L}	P_{r_R}	P_t
= 1.701			= 1.6[illegible]				
6.11	-5.87	-.0094	-.0166	.0[illegible]			
6.12	-3.6[illegible]	-.0105	-.0109	.018[illegible]			706.
6.12	-1.69	-.0105	-.0046	.010[illegible]			707.
6.12	-1.[illegible]	-.01[illegible]	-.0[illegible]	.00[illegible]			706.
6.1[illegible]	-.[illegible]	-.010[illegible]	.0[illegible]	-.001[illegible]			707.
6.12	.[illegible]	-.010[illegible]	.025	-.00[illegible]			707.
6.12	1.31	-.0102	.055	-.01[illegible]			708.
6.11	3.57	-.009[illegible]	.109	-.0[illegible]			707.
6.11	[illegible]	-.010[illegible]	.1[illegible]	-.0321			707.
6.12	-.[illegible]	-.010[illegible]	.00[illegible]	-.00[illegible]			708.
							708.
= 1.60[illegible]			= 1.6[illegible]				
6.12	-5.87	-.0109	-.016[illegible]	.0[illegible]	[illegible]		
6.12	-3.[illegible]	-.01[illegible]	-.012[illegible]	.01[illegible]	[illegible]		706.
6.12	-2.0[illegible]	-.010[illegible]	-.00[illegible]	.00[illegible]	[illegible]		707.
6.12	-1.0[illegible]	-.0107	-.00[illegible]	.00[illegible]	[illegible]		707.
6.12	-.[illegible]	-.010[illegible]	.00[illegible]	-.00[illegible]	[illegible]		707.
6.12	.[illegible]	-.0104	.026	-.00[illegible]	[illegible]		707.
6.12	1.3[illegible]	-.0101	.05[illegible]	-.0110	[illegible]		707.
6.11	[illegible]	-.009[illegible]	.11[illegible]	-.0222	[illegible]		707.
6.11	[illegible]	-.0100	.167	-.0326	[illegible]		707.
6.12	-.[illegible]	-.0106	.00[illegible]	-.001[illegible]	[illegible]		707.
							707.
= 1.70[illegible]			= 1.6[illegible]				
6.12	-5.[illegible]	-.01[illegible]	-.016[illegible]	.02[illegible]	[illegible]	[illegible]	
6.12	-3.[illegible]	-.0101	-.010[illegible]	.01[illegible]	[illegible]	[illegible]	707.
6.12	-2.[illegible]	-.0106	-.00[illegible]	.00[illegible]	[illegible]	[illegible]	707.
6.11	-1.[illegible]	-.0094	-.00[illegible]	.00[illegible]	[illegible]	[illegible]	707.
6.12	-.[illegible]	-.0093	.021	-.00[illegible]	[illegible]	[illegible]	707.
6.11	.35	-.0096	.042	-.0059	[illegible]	[illegible]	707.
6.11	1.[illegible]	-.009[illegible]	.068	-.010[illegible]	[illegible]	[illegible]	706.
6.11	[illegible]	-.00[illegible]	.11[illegible]	-.02[illegible]	[illegible]	[illegible]	707.
6.11	[illegible]	-.0087	.173	-.0311	[illegible]	[illegible]	706.
6.12	-.[illegible]	-.00[illegible]	.01[illegible]	-.001[illegible]	[illegible]	[illegible]	706.
							707.



(a) Model.

Figure 1.- Model photographs.

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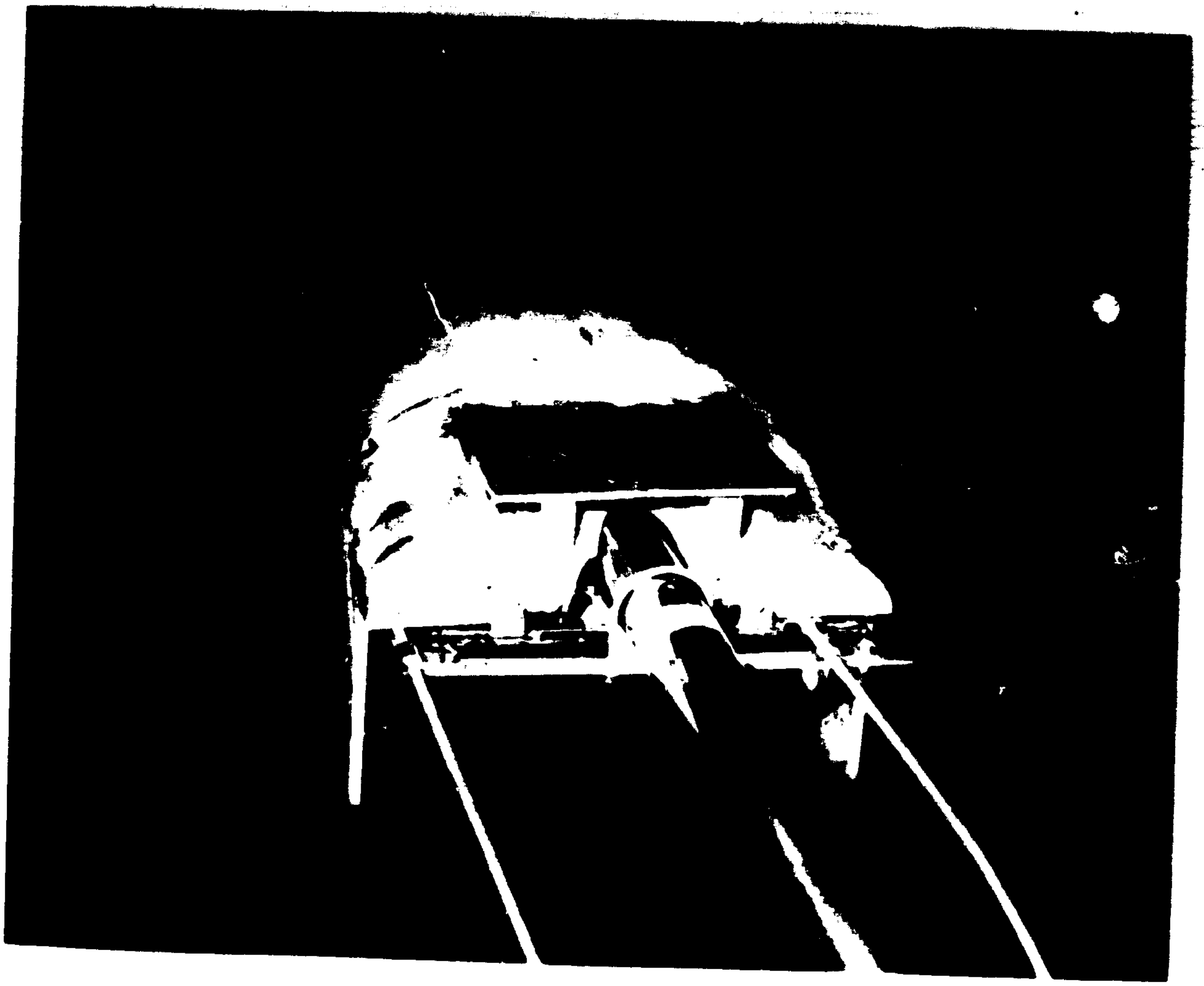
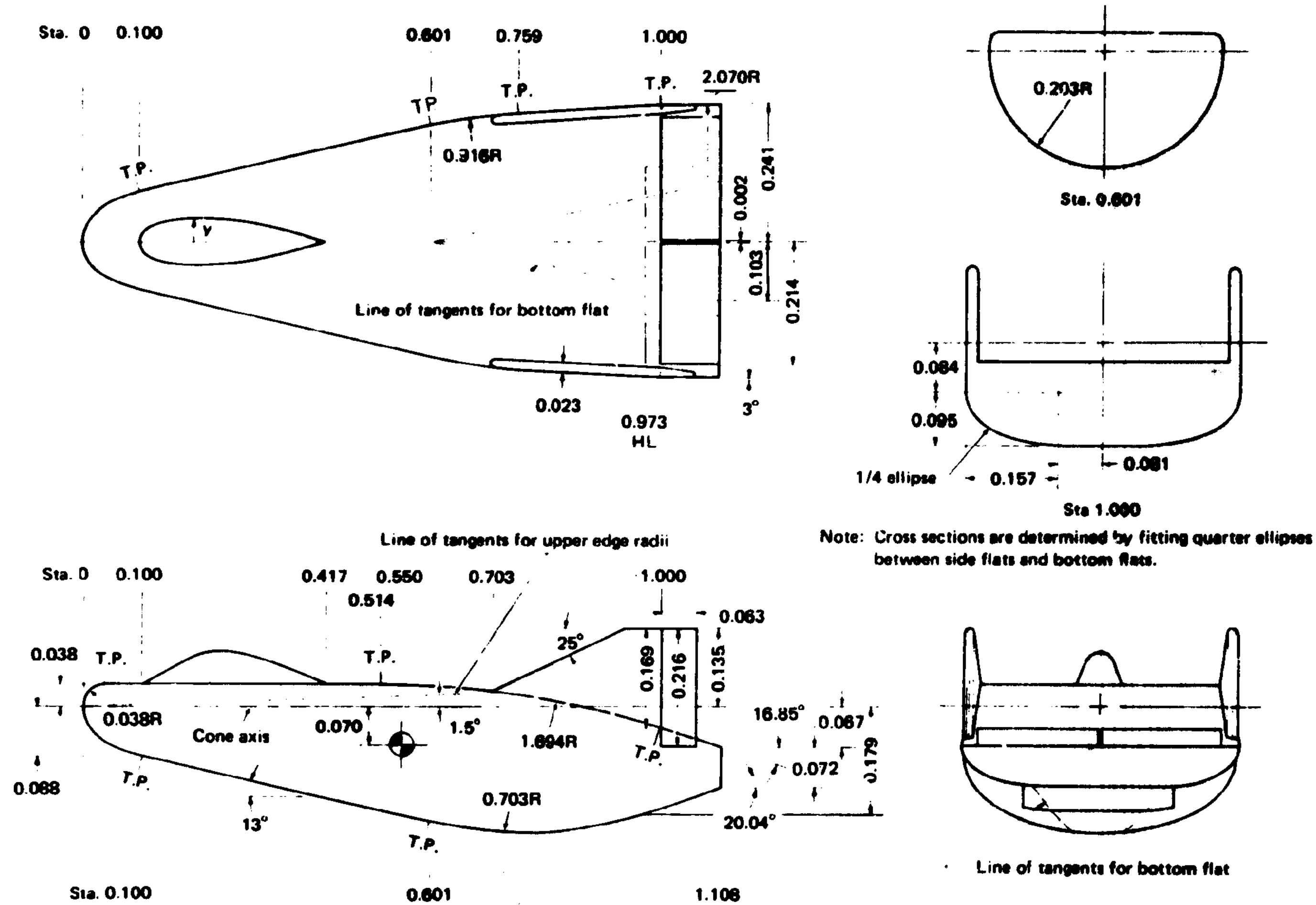
(b) Front view of installed model.

Figure 1.- Continued.



(c) Rear view of installed model.

Figure 1.- Concluded.

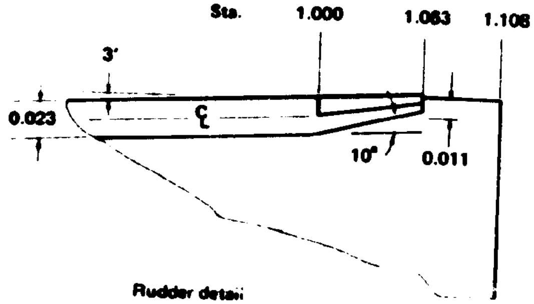


Equation for nose shape:

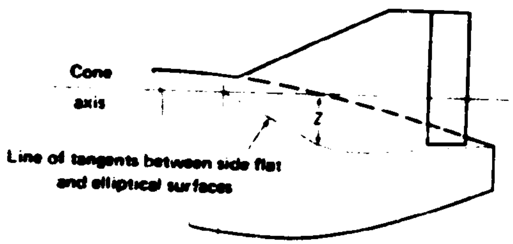
$$\frac{y}{l} = .38618\sqrt{\frac{x}{l}} - .12390\frac{x}{l} - 4.08407\left(\frac{x}{l}\right)^2 + 18.70215\left(\frac{x}{l}\right)^3$$

(a) Three-view drawing.

Figure 2.- Model dimensions, given in fraction of model reference length (l = 50.8 cm).

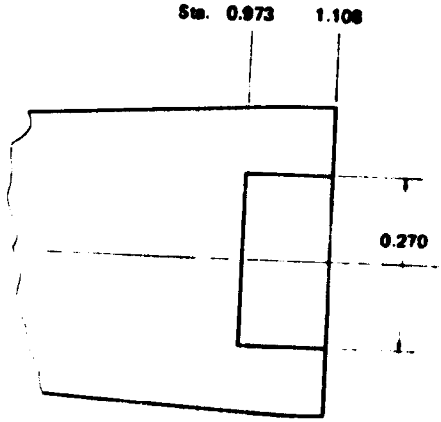


Rudder detail
Outer panel only deflects



Sta. 0.673

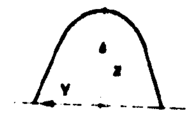
Control chord lengths		Line of tangents Sta.	z
		0.673	0
		0.811	0.069
Rudder	0.063	0.838	0.081
Upper flap	0.103	0.865	0.088
Lower flap	0.130	0.892	0.092
		0.919	0.092
		0.946	0.091
		0.973	0.088
		1.108	0.087



Lower flaps

Canopy coordinates

Sta.	y	z
0.100	0	0
0.113	0.024	–
0.125	0.030	–
0.150	0.036	–
0.175	0.038	0.044
0.200	0.038	0.053
0.225	0.038	0.056
0.250	0.038	0.055
0.275	0.035	0.052
0.300	0.031	0.045
0.325	0.026	0.037
0.350	0.020	0.028
0.375	0.014	0.018
0.400	0.007	0.008
0.417	0	0

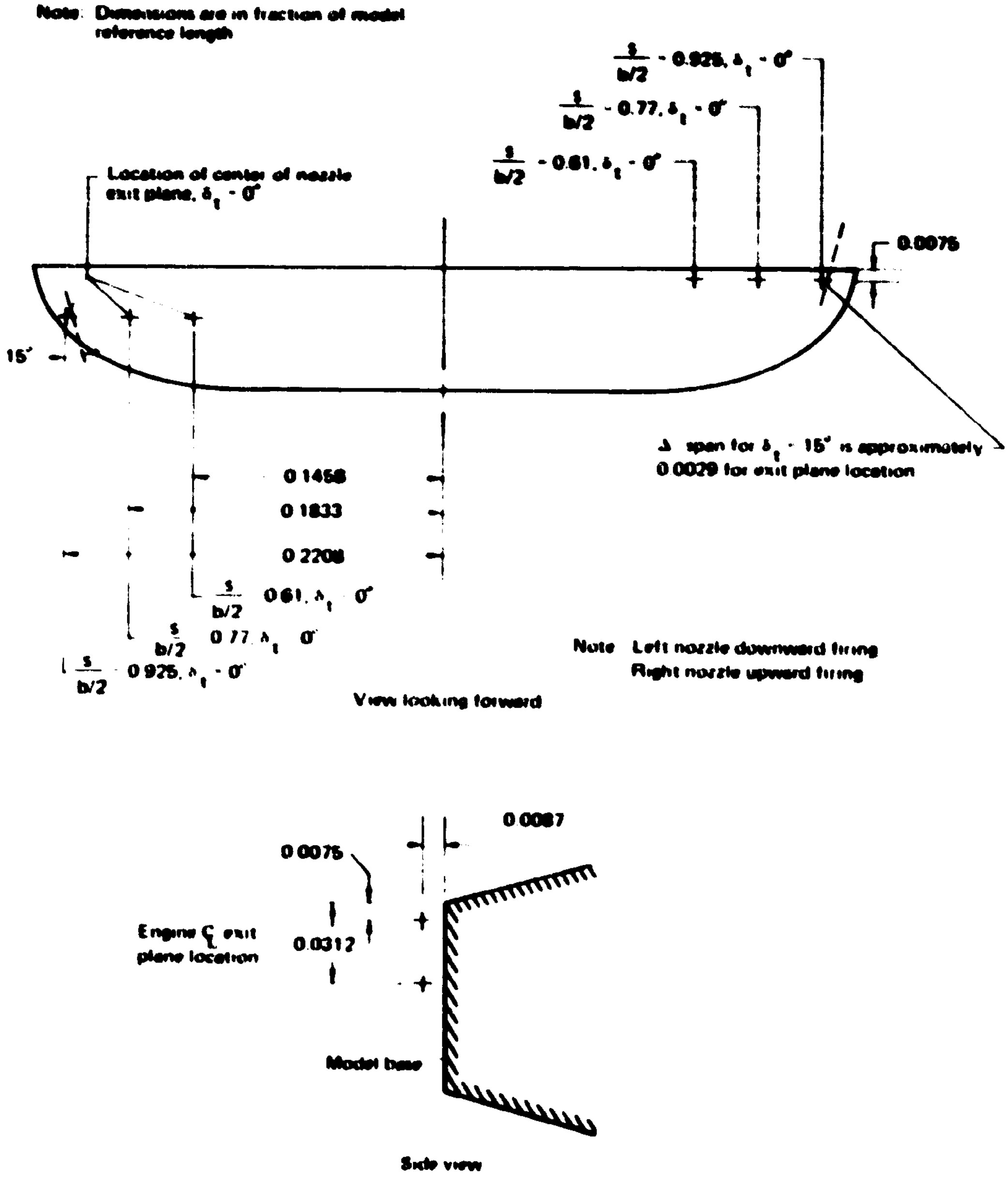


Sta. 0.225

Sta.	y	z
0.225	0.038	0
	0.036	0.010
	0.031	0.021
	0.027	0.031
	0.023	0.042
	0.018	0.048
	0.011	0.054
	0	0.056

(b) Component details.

Figure 2.- Continued.

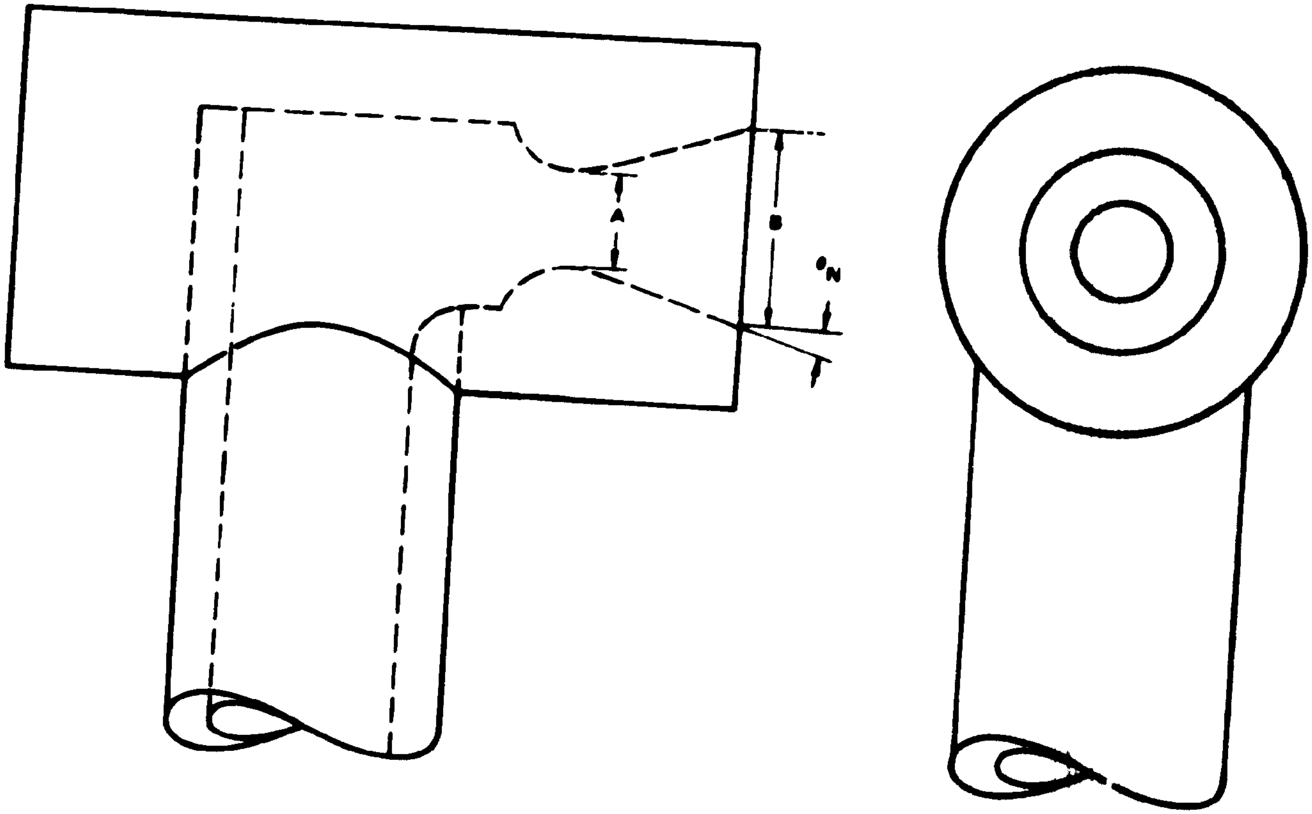


(c) Nozzle exit locations.

Figure 2.- Continued.

Note: Dimensions are in fraction of model reference length

Nozzle	A	B	θ_N
1	0.00318	0.00677	16°
2	0.00221	0.00677	16°



(d) Nozzle dimensions.

Figure 2.- Concluded.

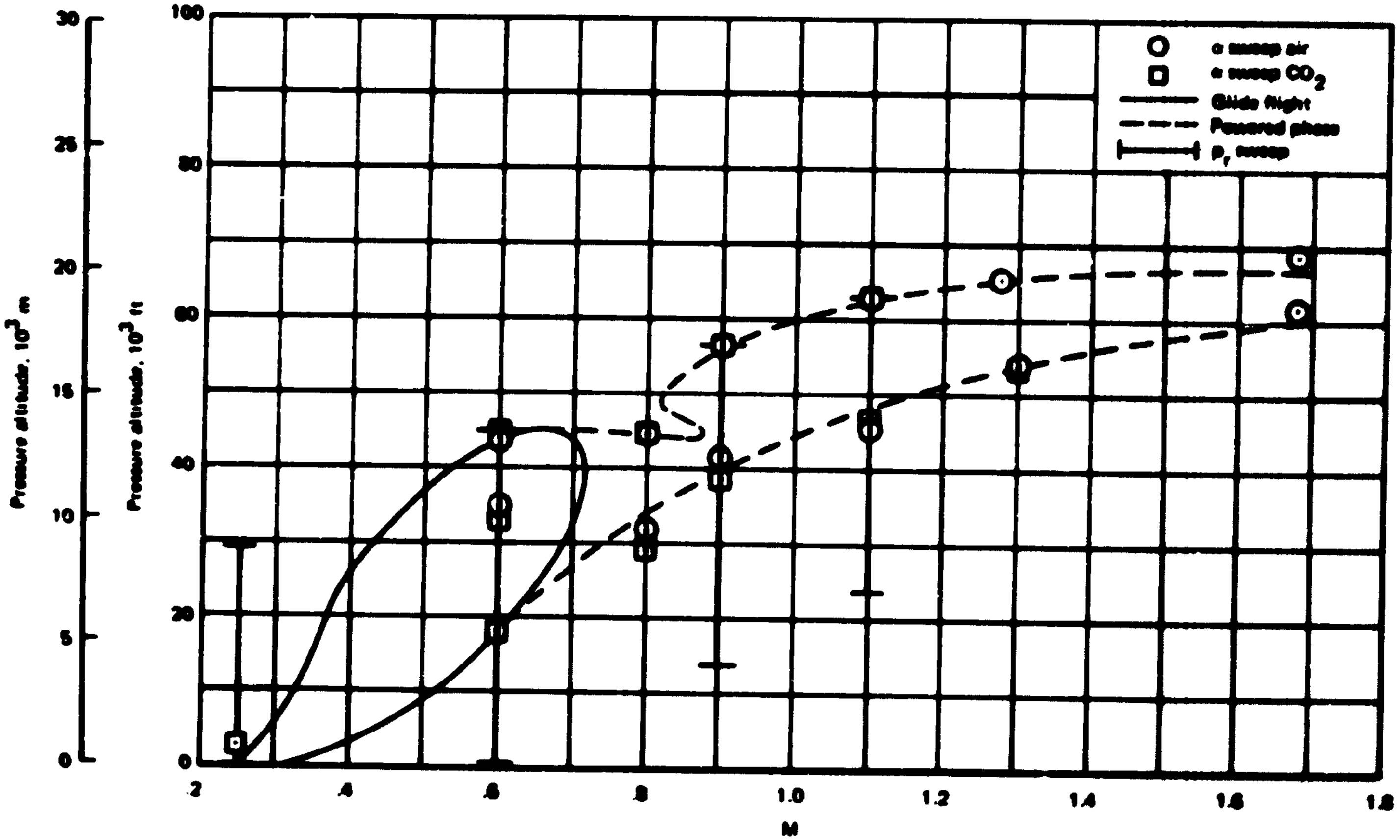
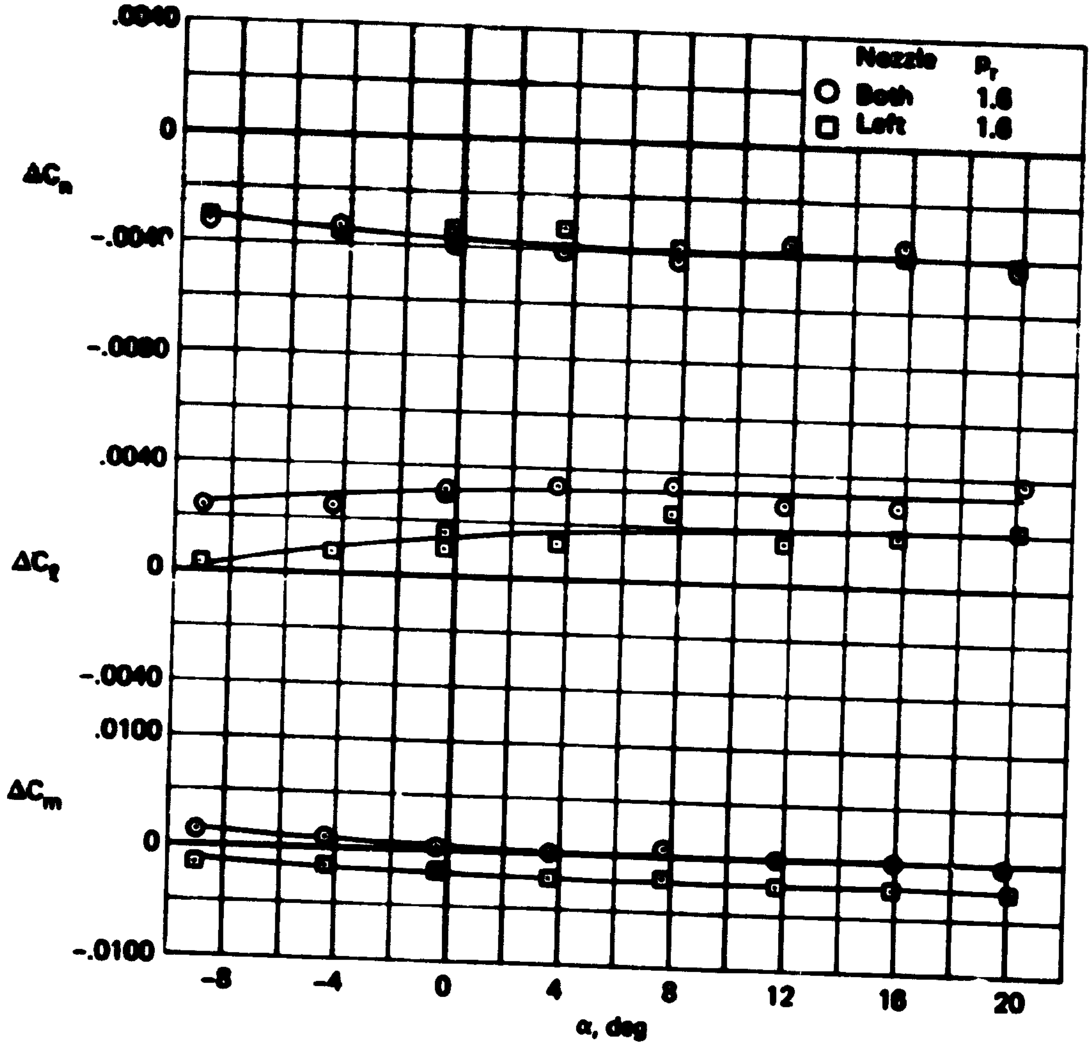
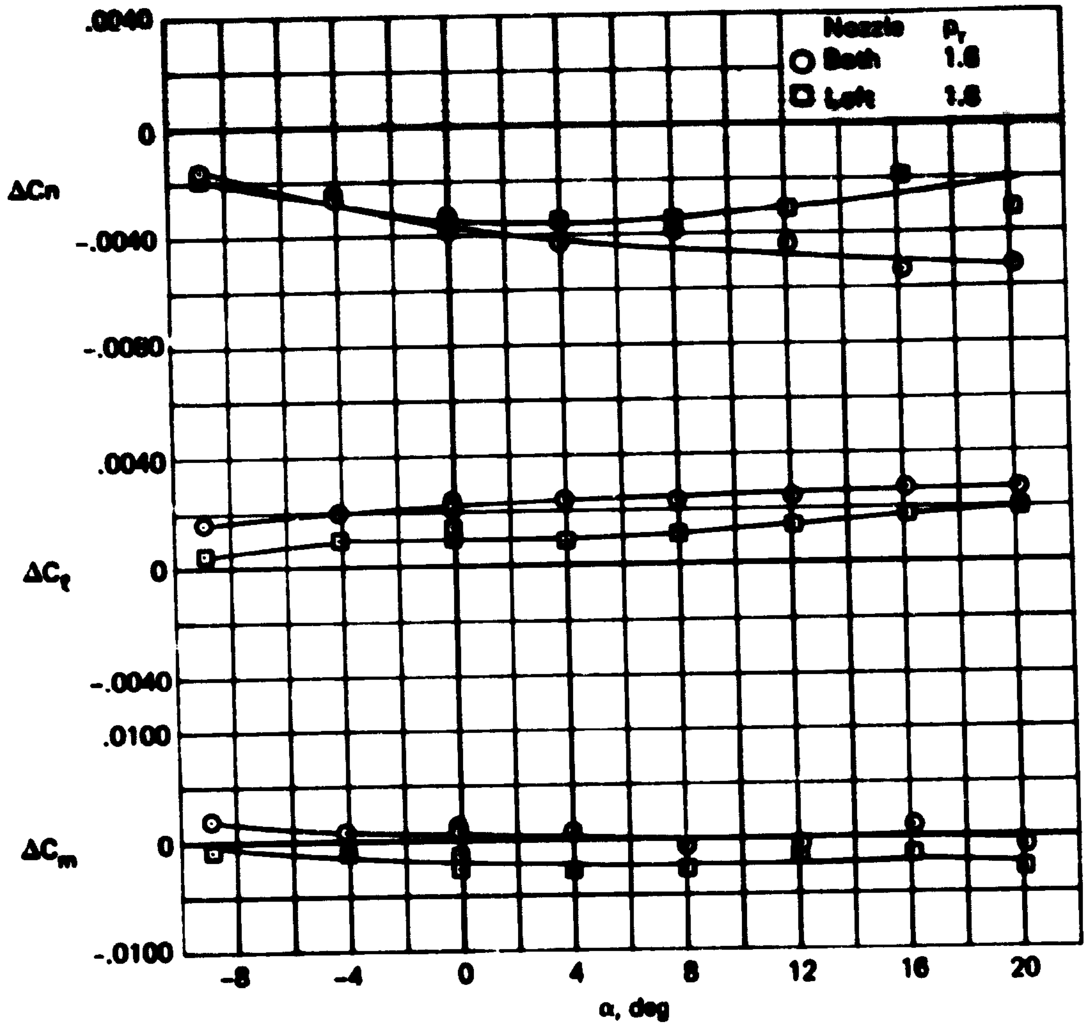


Figure 3.- Flight altitude range of M2-F2 flight vehicle.



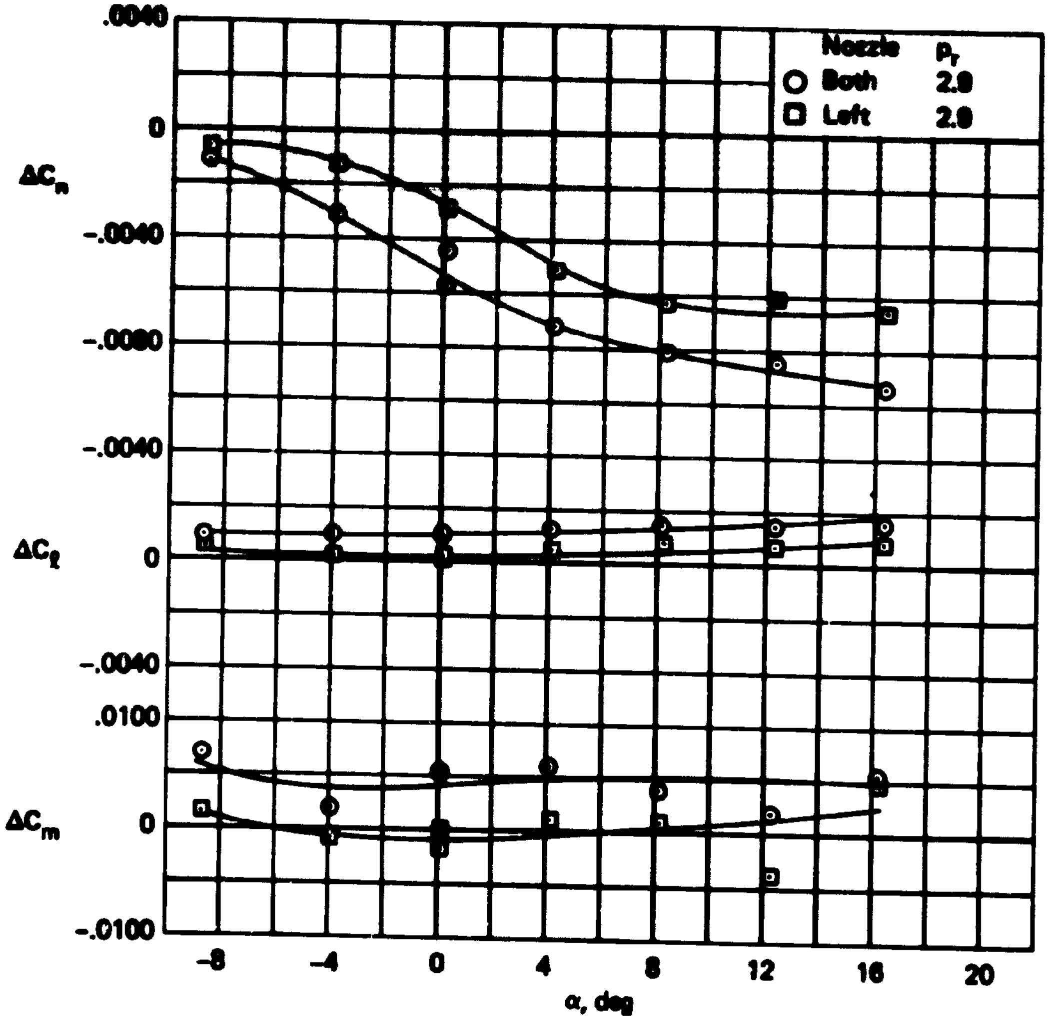
(a) M = 0.6, Re = 1.20×10^6

Figure 4.- Variation of jet interactions with angle of attack: $\frac{s}{b/2_L} = 0.92$, $\frac{s}{b/2_R} = 0.92$, $\delta_t = 0°$, $\delta_u = -20°$, $\delta_l = 35°$, air.



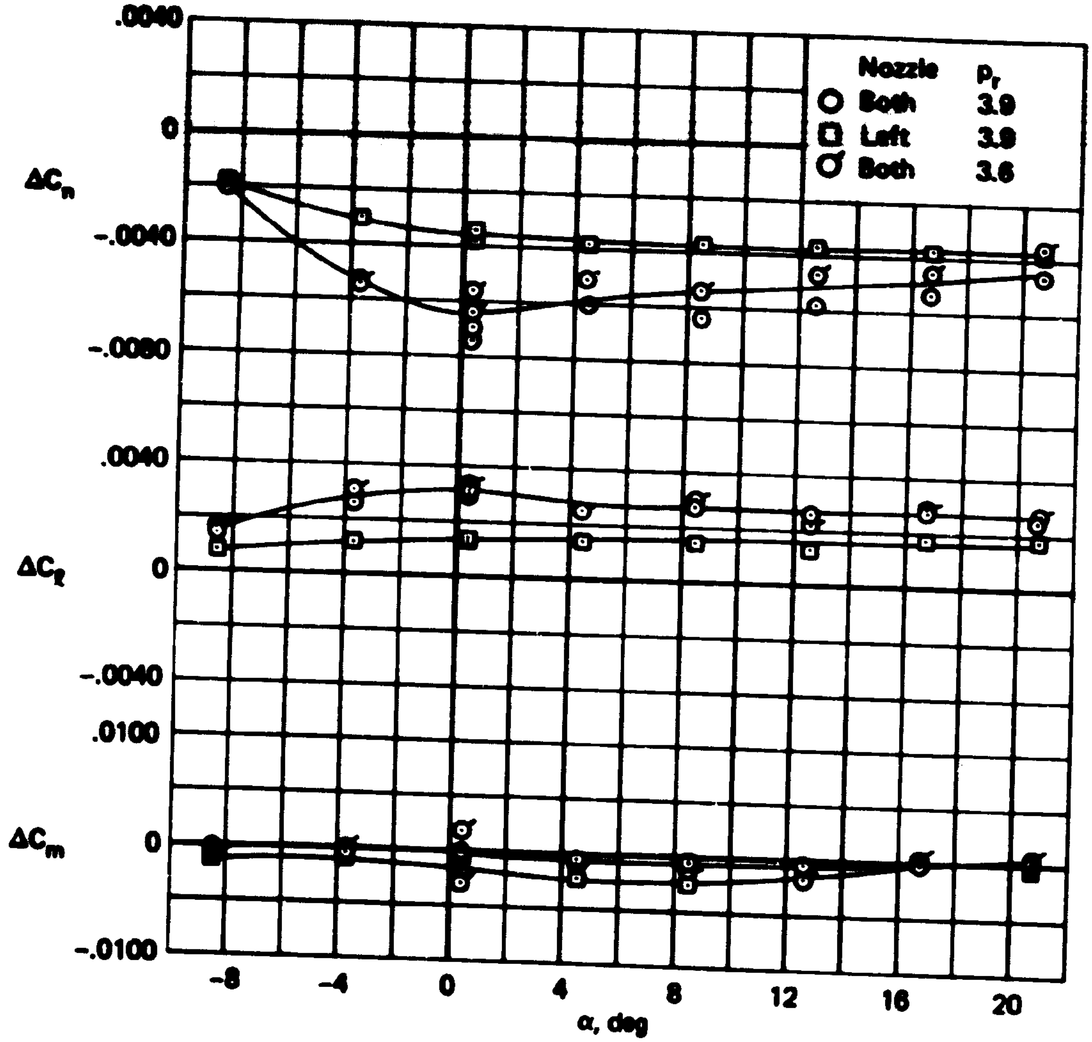
(b) $M = 0.8$, $Re = 1.44 \times 10^6$

Figure 4.- Continued.



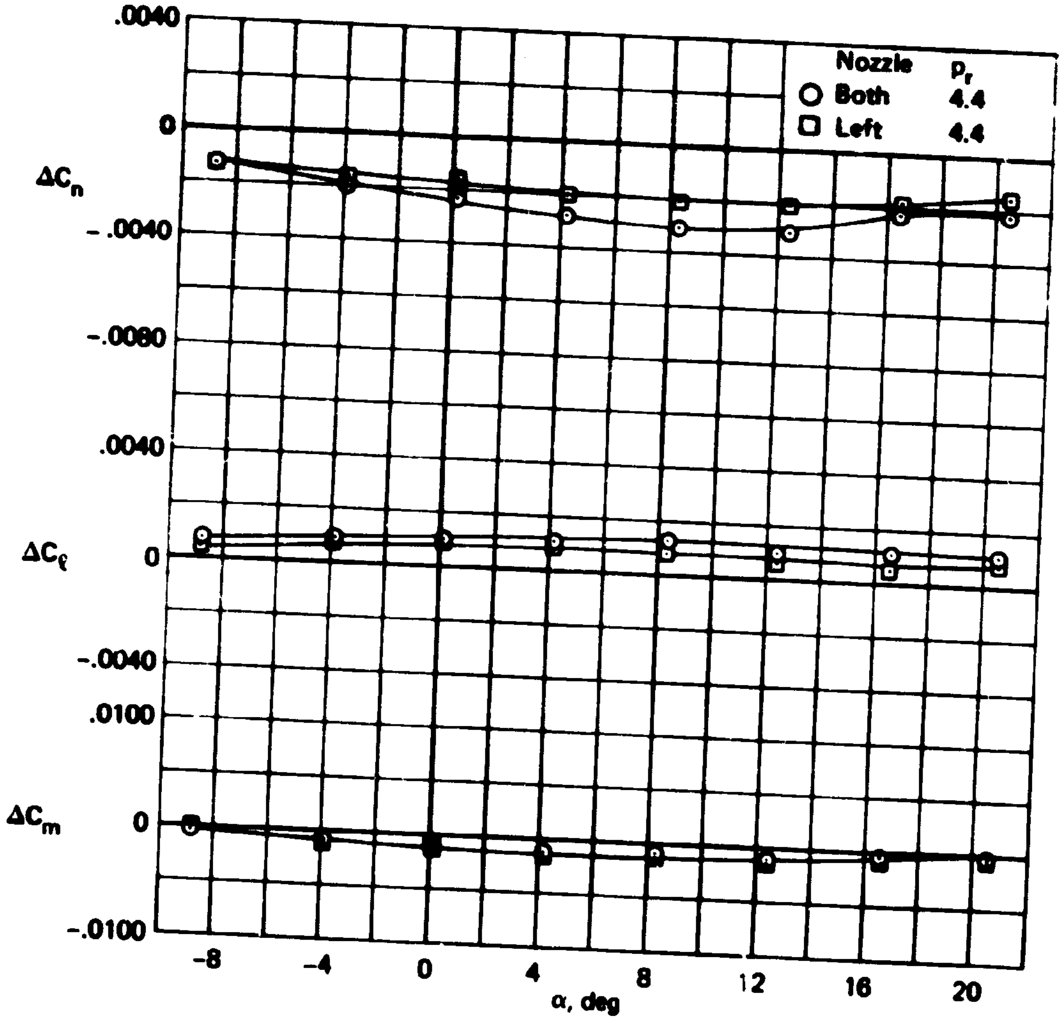
(c) M = 0.9, Re = 1.50×10^6

Figure 4.- Continued.



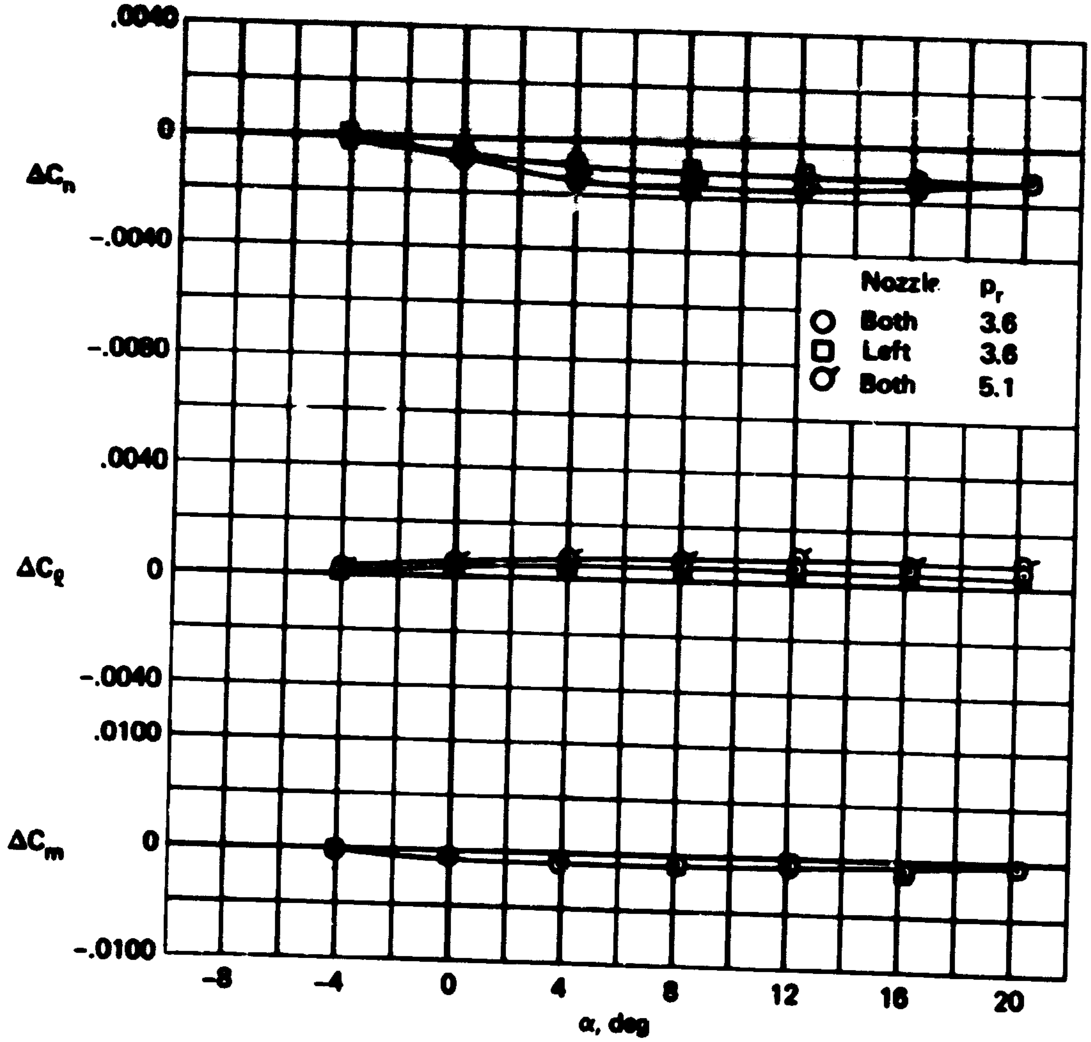
(d) M = 1.1, Re = 1.56×10^6

Figure 4.- Continued.



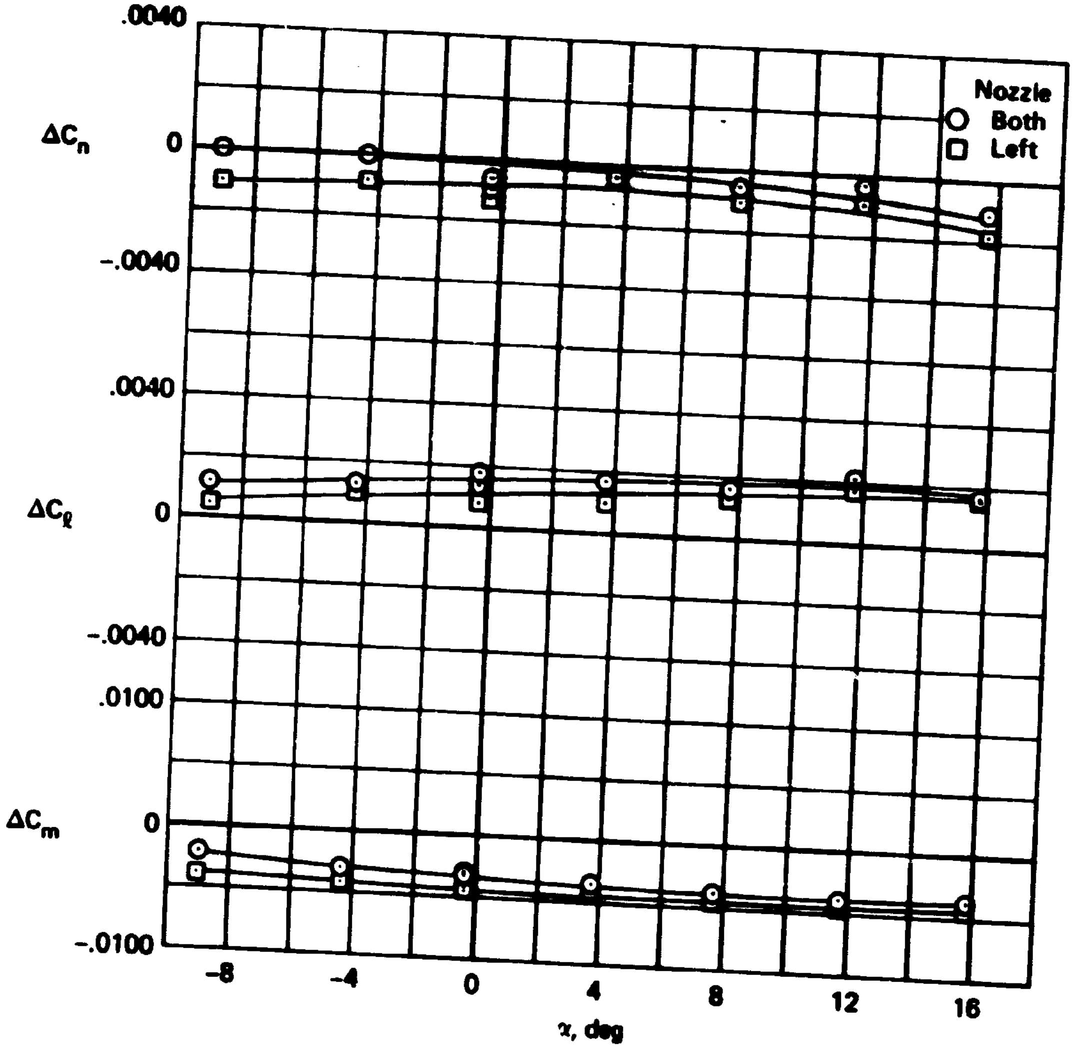
(e) M = 1.3, Re = 1.56×10^6.

Figure 4.- Continued.



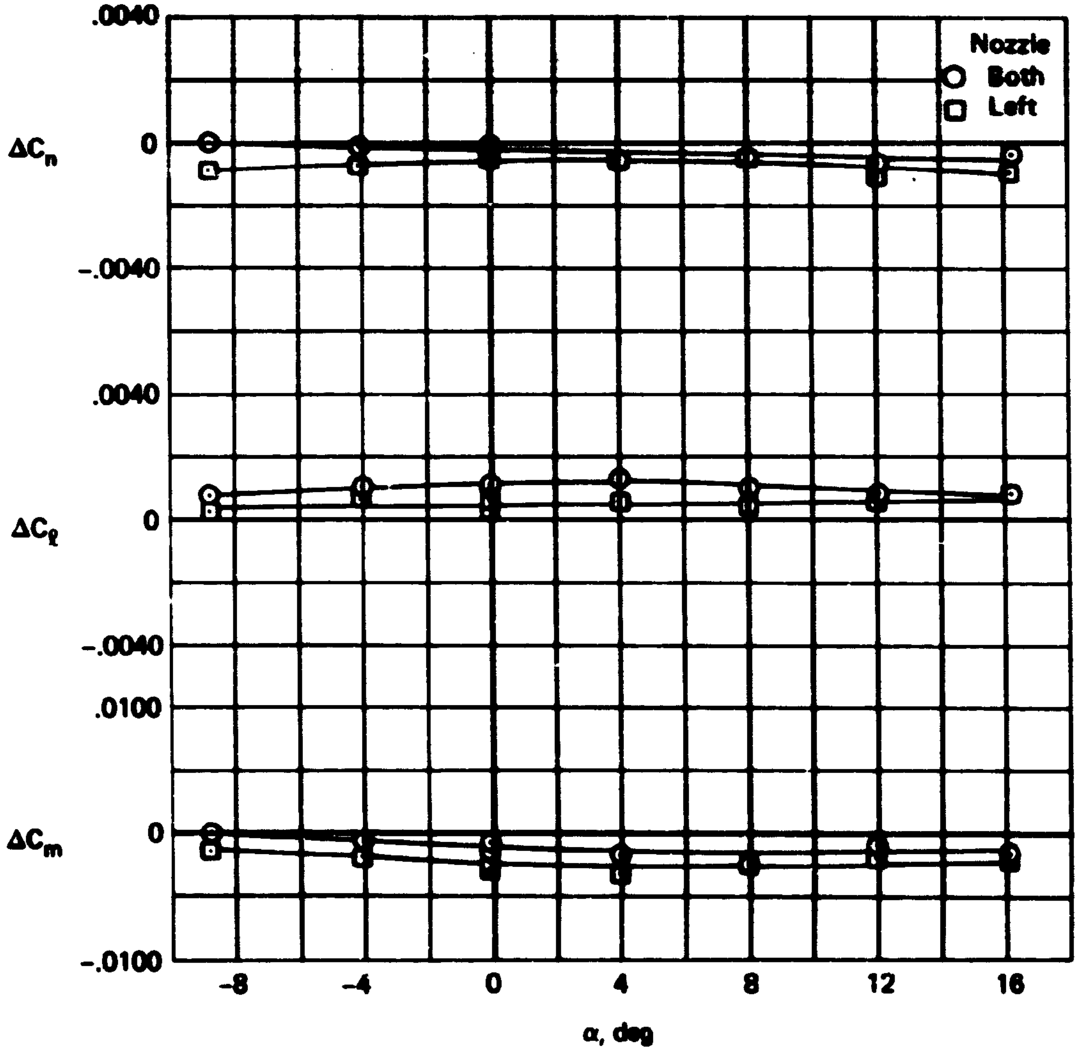
(f) M = 1.7, Re = 1.44×10⁶

Figure 4.- Concluded.



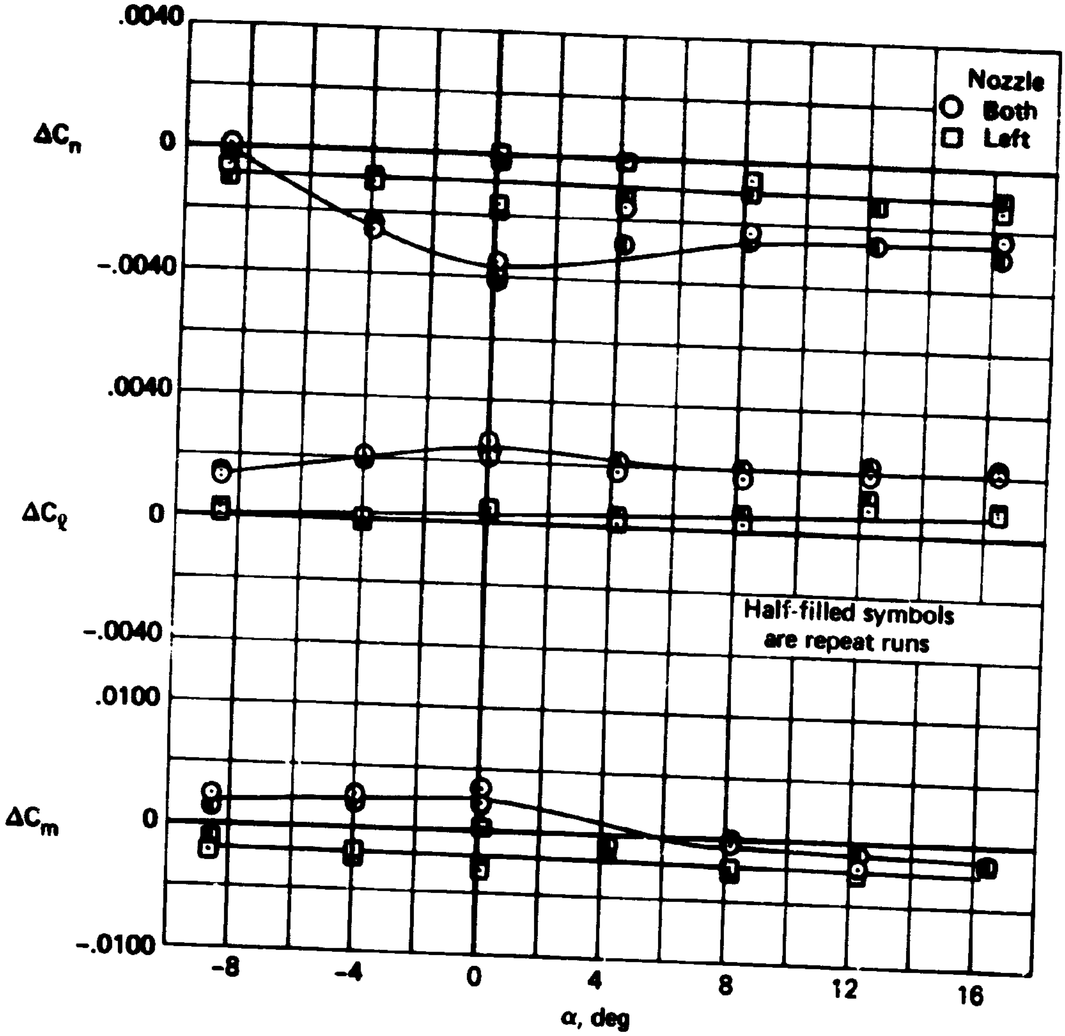
(a) $M = 0.6$, $p_r = 1.59$, $Re = 1.20\times10^6$

Figure 5.- Variation of jet interactions with angle of attack: $\frac{s}{b/2_L} = 0.61$, $\frac{s}{b/2_R} = 0.92$, $\delta_t = 0°$, $\delta_u = -20°$, $\delta_l = 35°$, air.



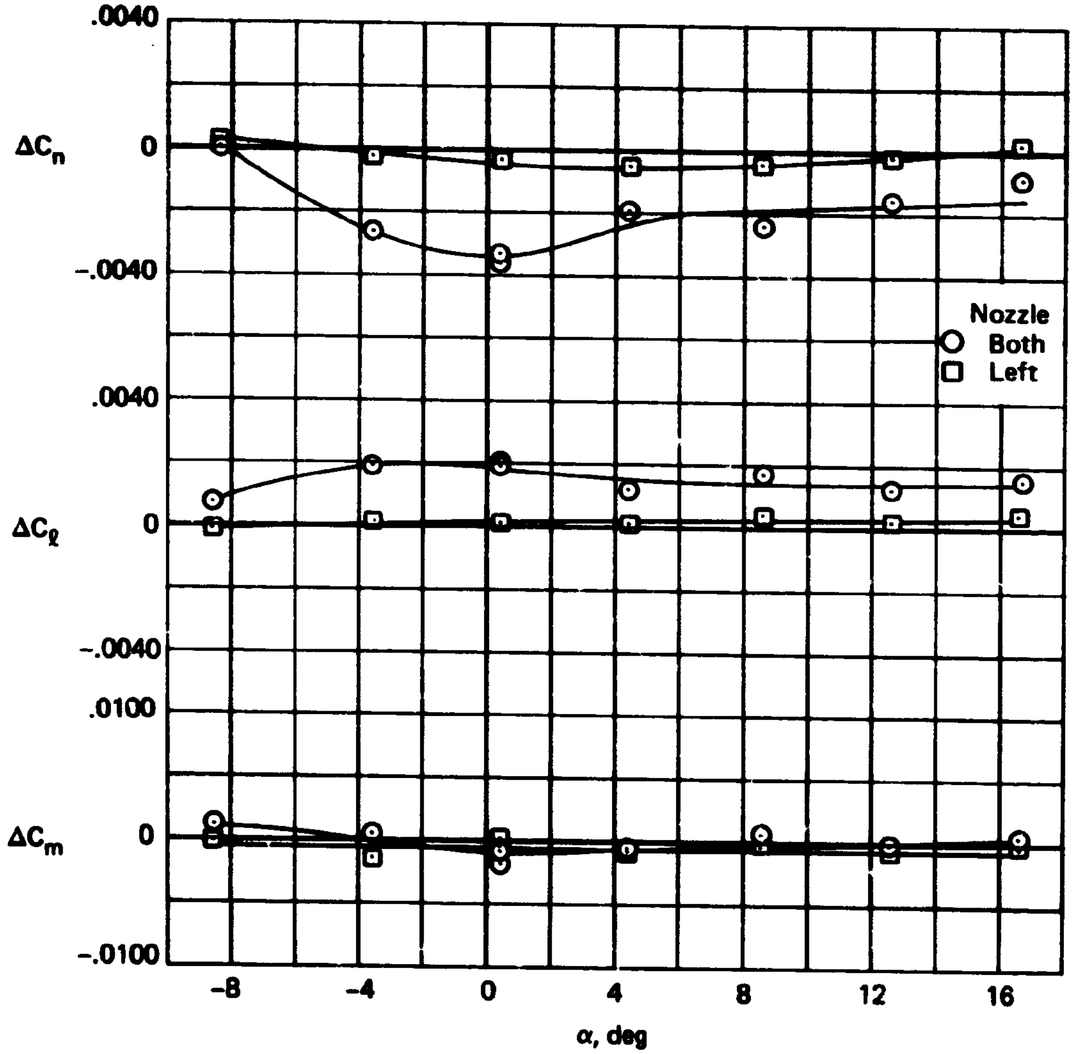
(b) $M = 0.8$, $p_r = 1.65$, $Re = 1.44 \times 10^6$

Figure 5.- Continued.



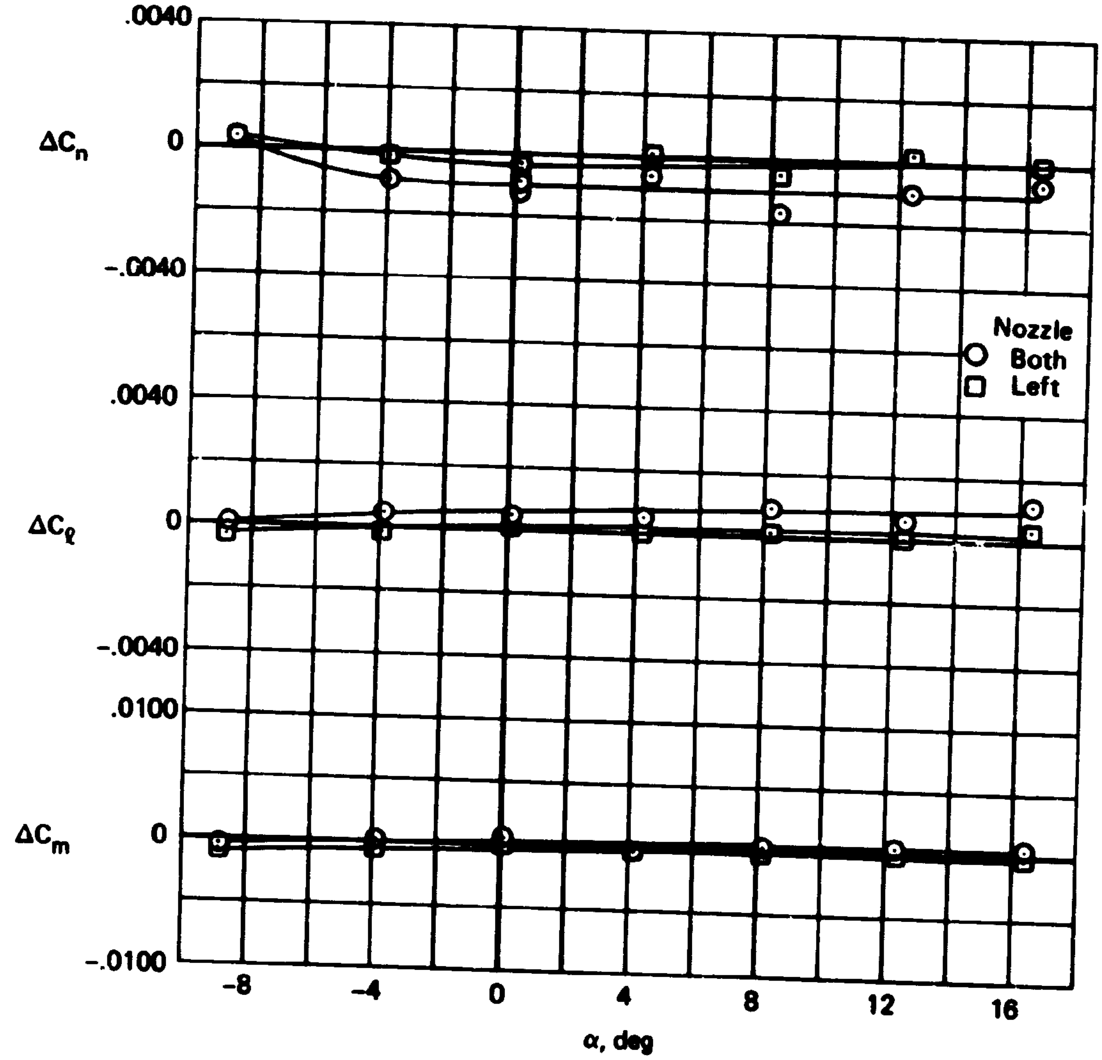
(c) $M = 0.9$, $p_r = 2.95$, $Re = 1.50 \times 10^6$.

Figure 5.- Continued.



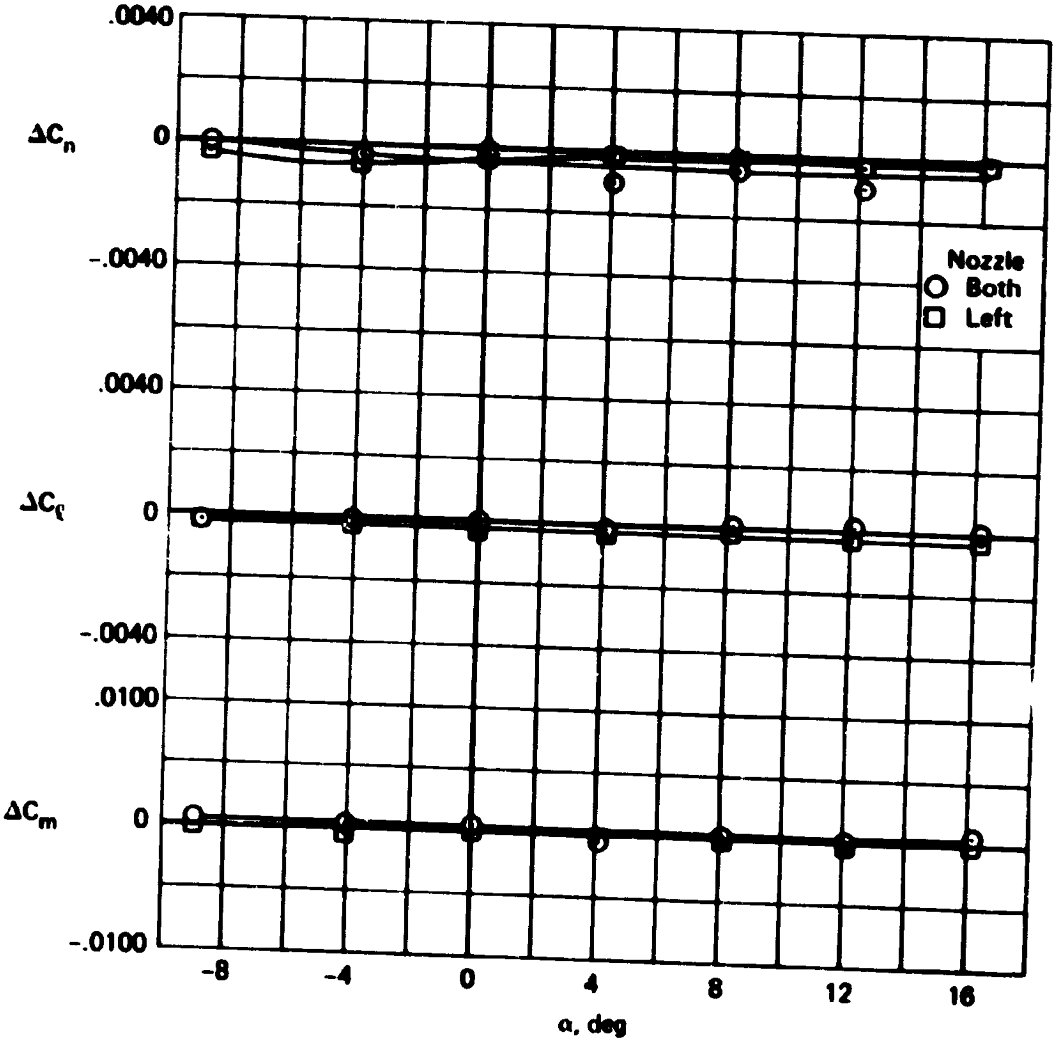
(d) M = 1.1, p_r = 3.95, Re = 1.56×10^6.

Figure 5.- Continued.



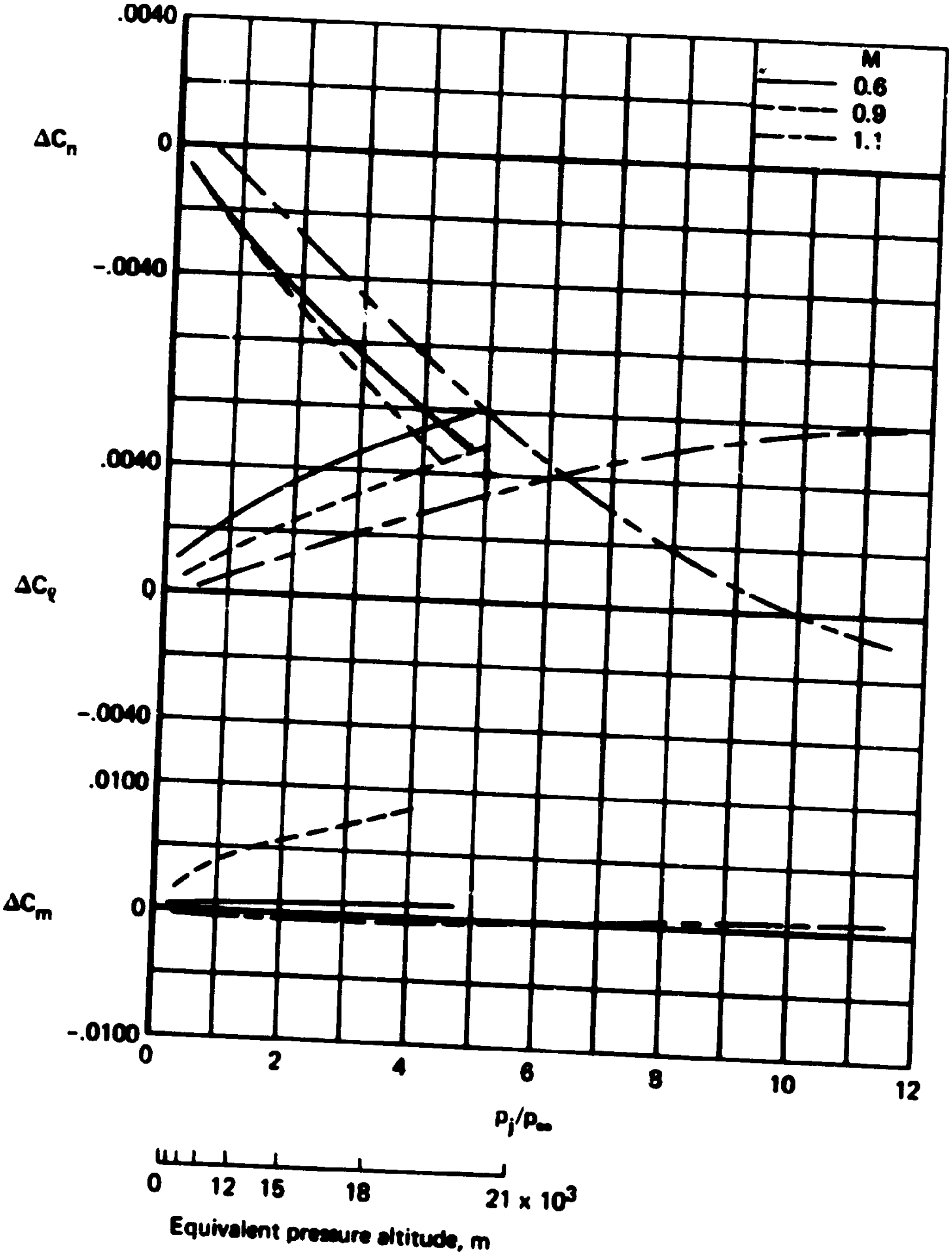
(e) M = 1.3, p_r = 4.4, Re = 1.56×10^6

Figure 5.- Continued.



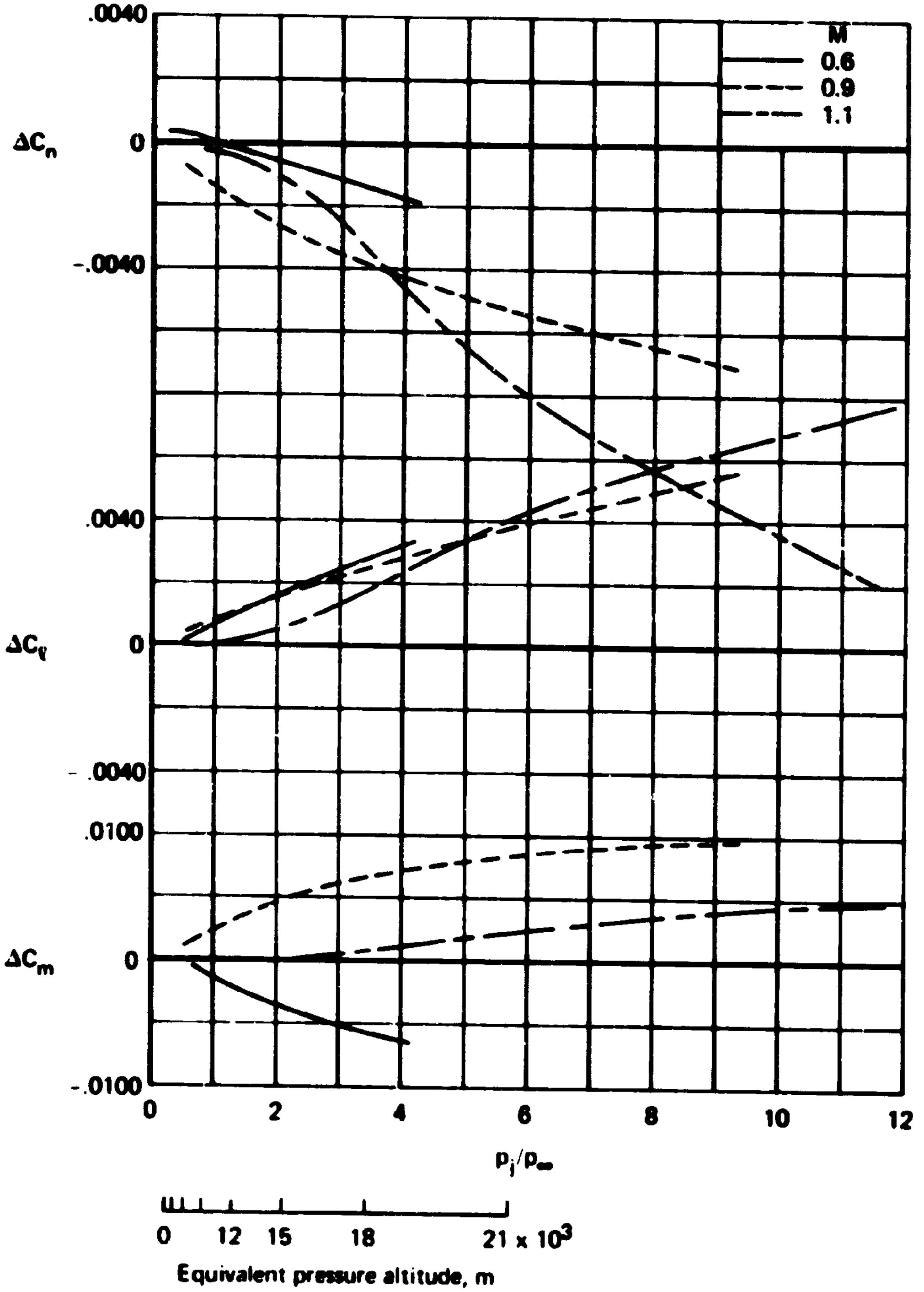
(f) $M = 1.7$, $p_r = 5.2$, $Re = 1.44 \times 10^6$

Figure 5.- Concluded.



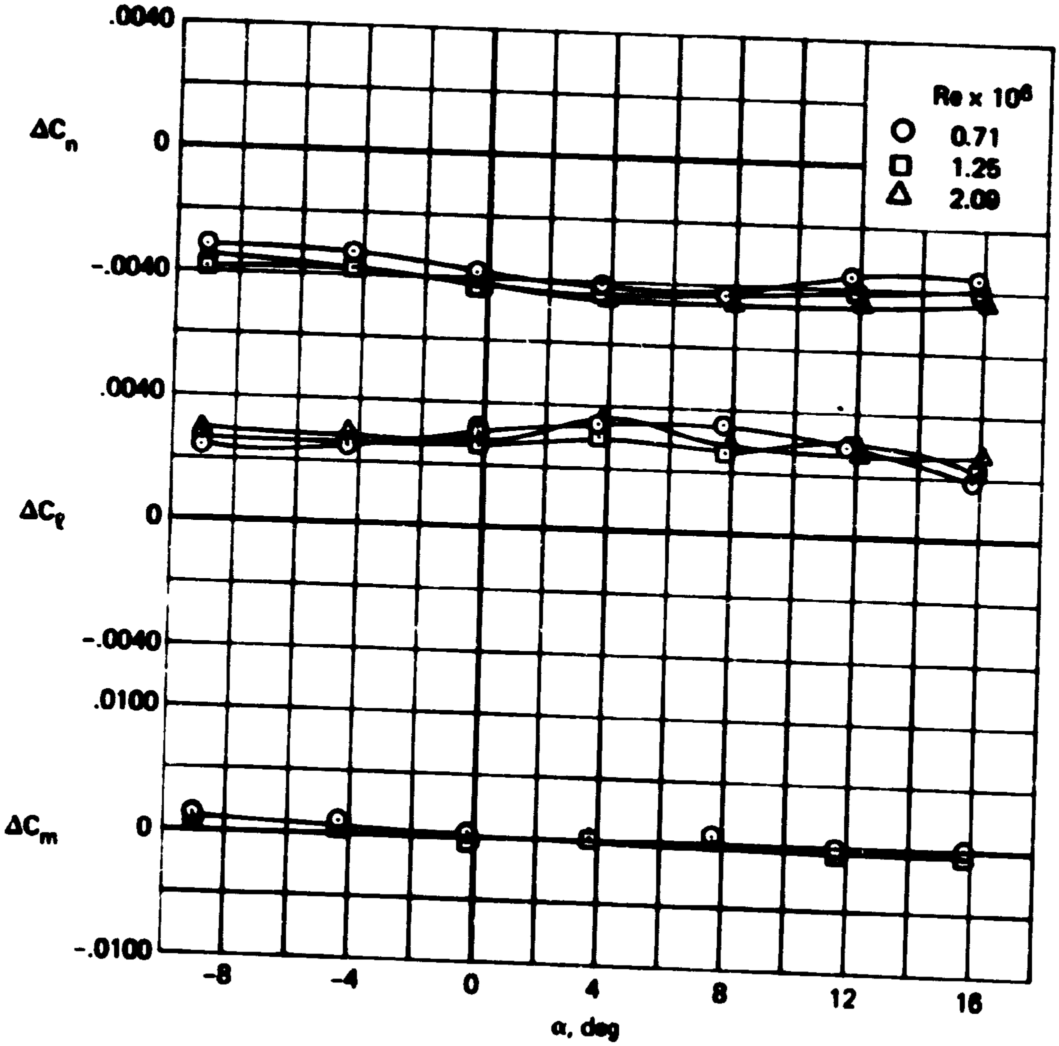
(a) $\frac{s}{b/2_L} = 0.92$, $\frac{s}{b/2_R} = 0.92$, $\delta_t = 0°$

Figure 6.- Variation of jet interactions with jet pressure ratio: $\alpha = 0°$, $\delta_u = -20°$, $\delta_l = 35°$, air.



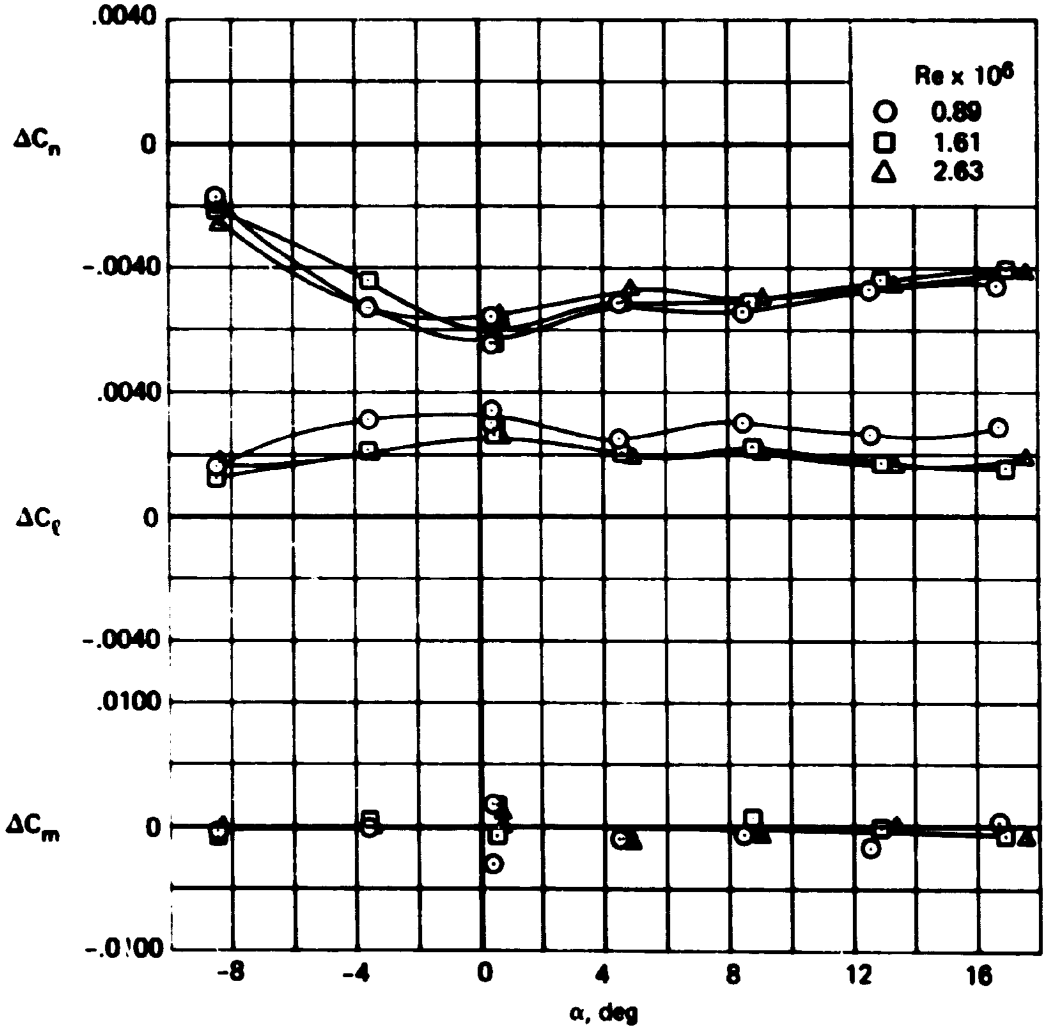
(b) $\frac{s}{b/2_L} = 0.62$, $\frac{s}{b/2_R} = 0.92$, $\delta_t = 15°$

Figure 6.- Concluded.



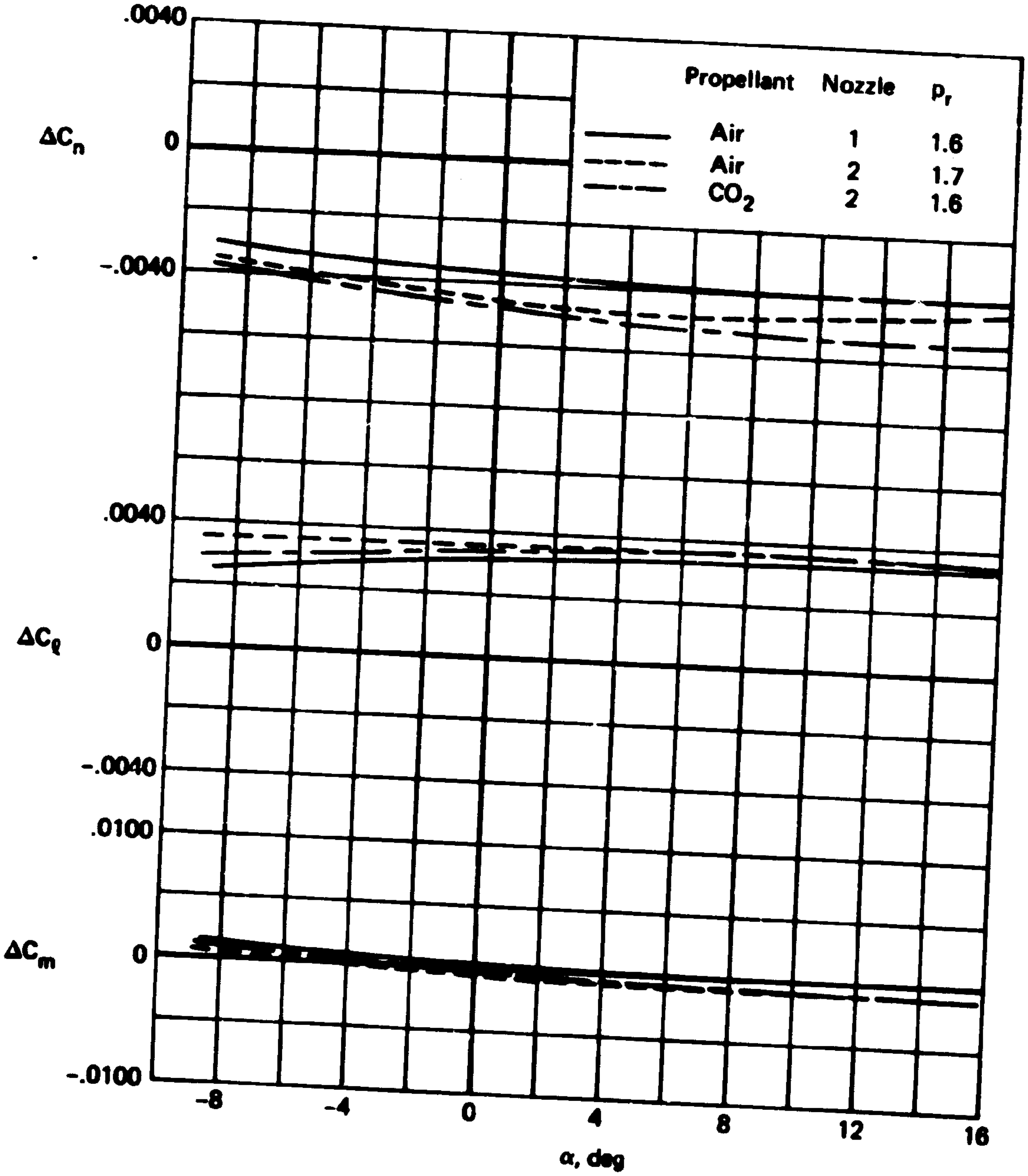
(a) $M = 0.6$, $p_r = 1.58$

Figure 7.- The effect of Reynolds number on the jet interactions: $\frac{s}{b/2_{L+R}} = 0.92$, $\delta_t = 0°$, $\delta_u = -20°$, $\delta_l = 35°$, air.



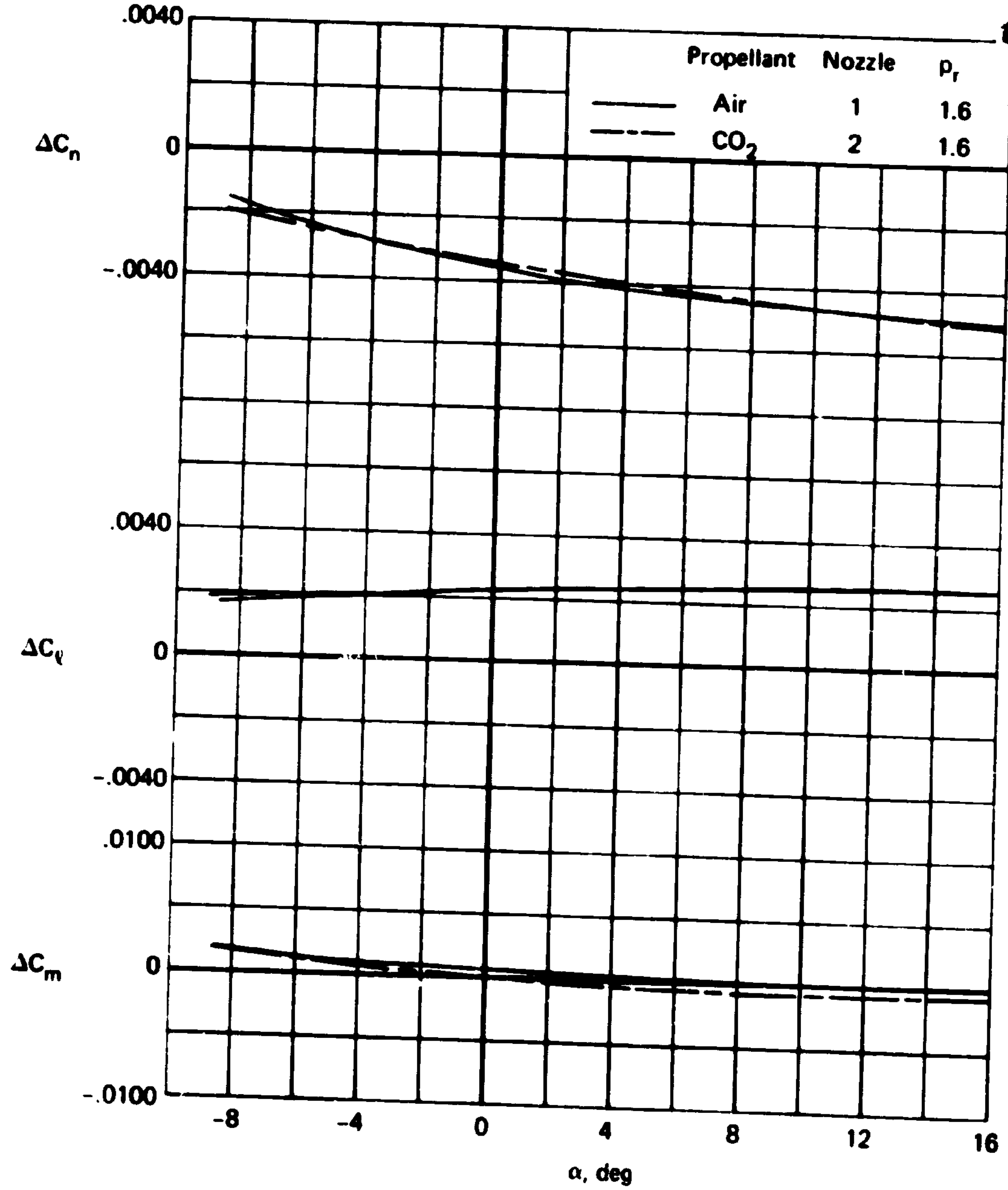
(b) M = 1.1, p_r = 3.8

Figure 7.- Concluded.



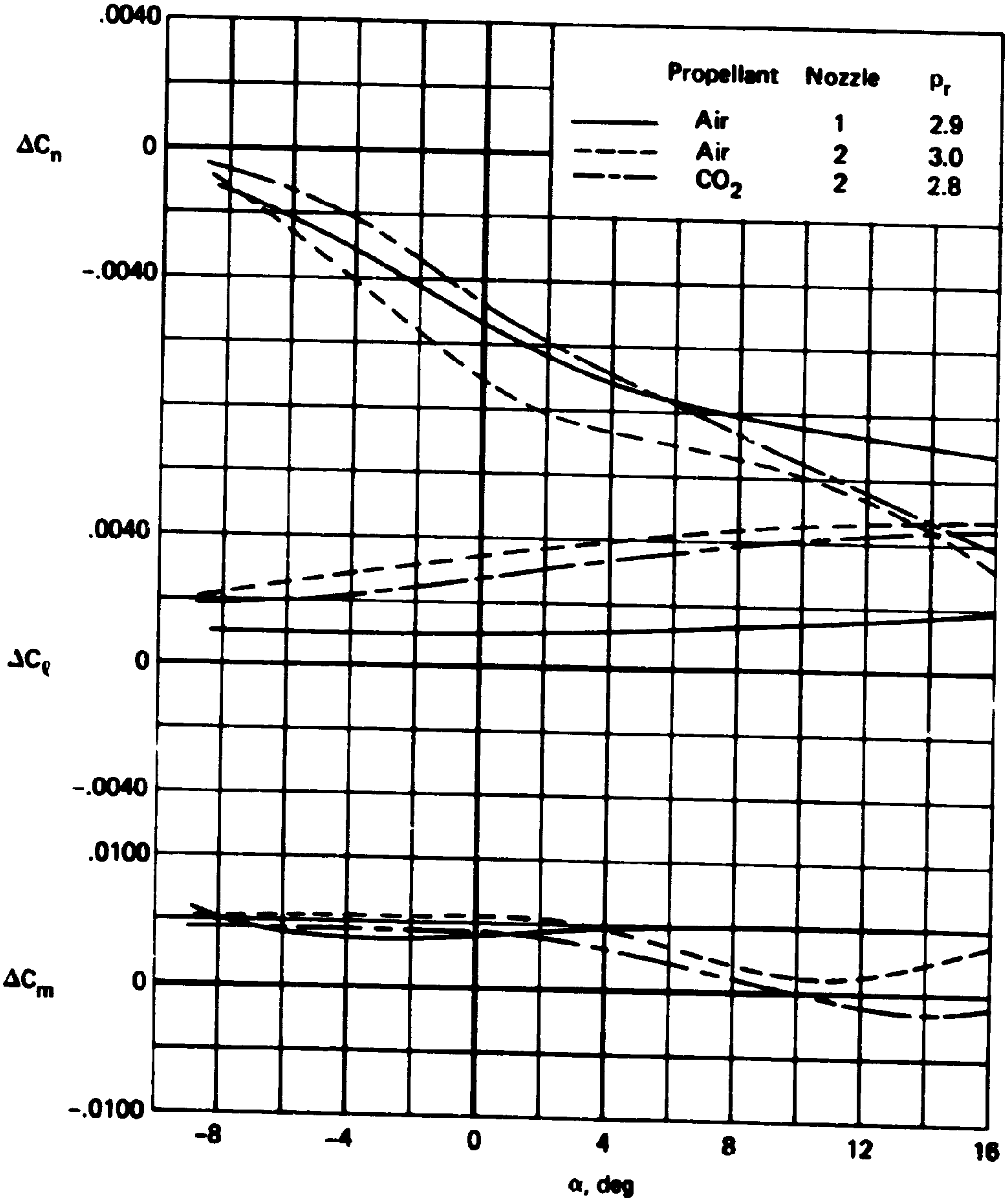
(a) $M = 0.6$, $Re = 1.20 \times 10^6$

Figure 8.- Comparison of jet simulations: $\frac{s}{b/2_L} = 0.92$, $\frac{s}{b/2_R} = 0.92$, $\delta_t = 0°$, $\delta_u = -20°$, $\delta_l = 35°$.



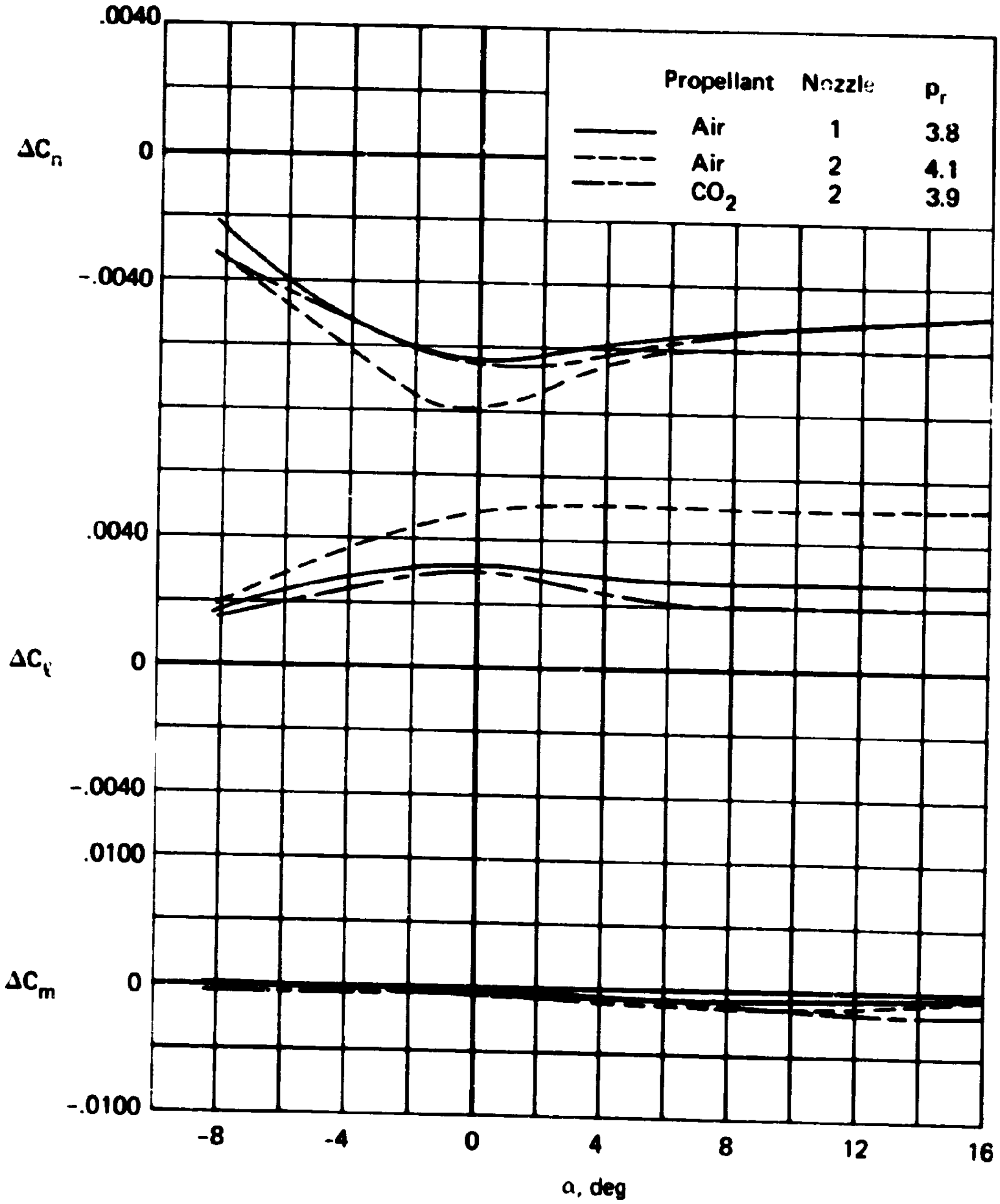
(b) M = 0.8, Re = 1.44×10^6

Figure 8.- Continued.



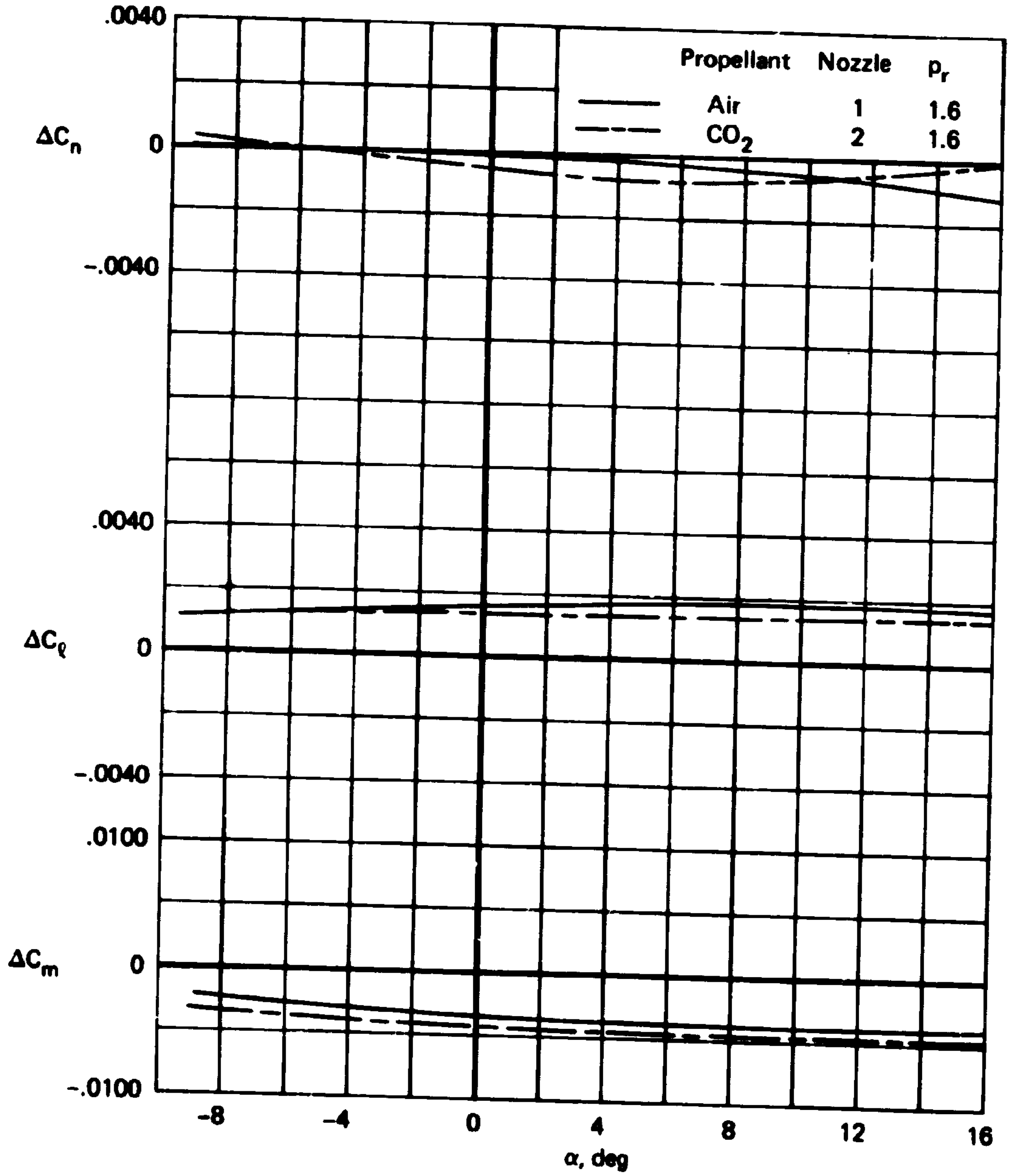
(c) $M = 0.9$, $Re = 1.50 \times 10^6$

Figure 8.- Continued.



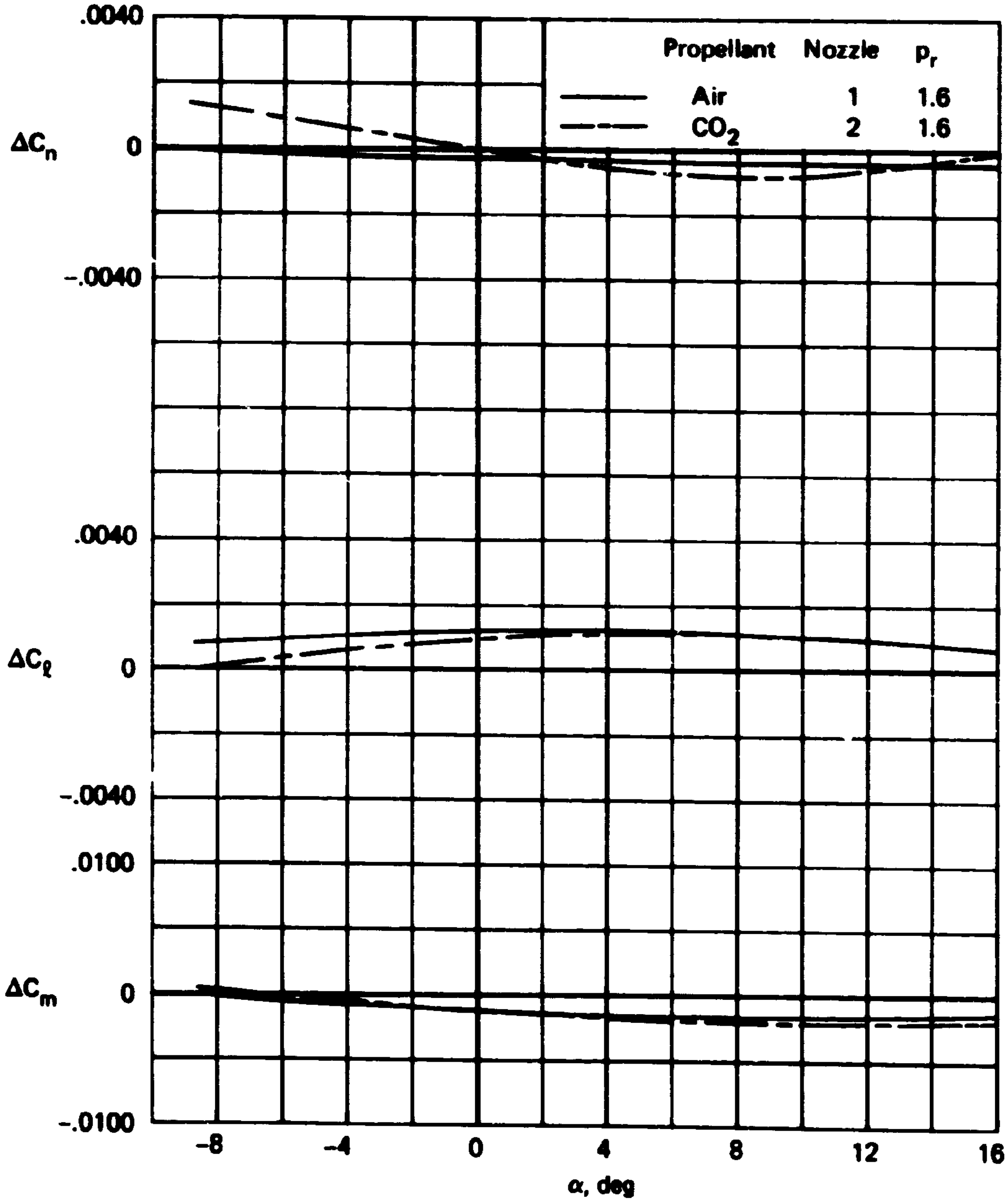
(d) M = 1.1, Re = 1.56×10^6

Figure 8.- Concluded.



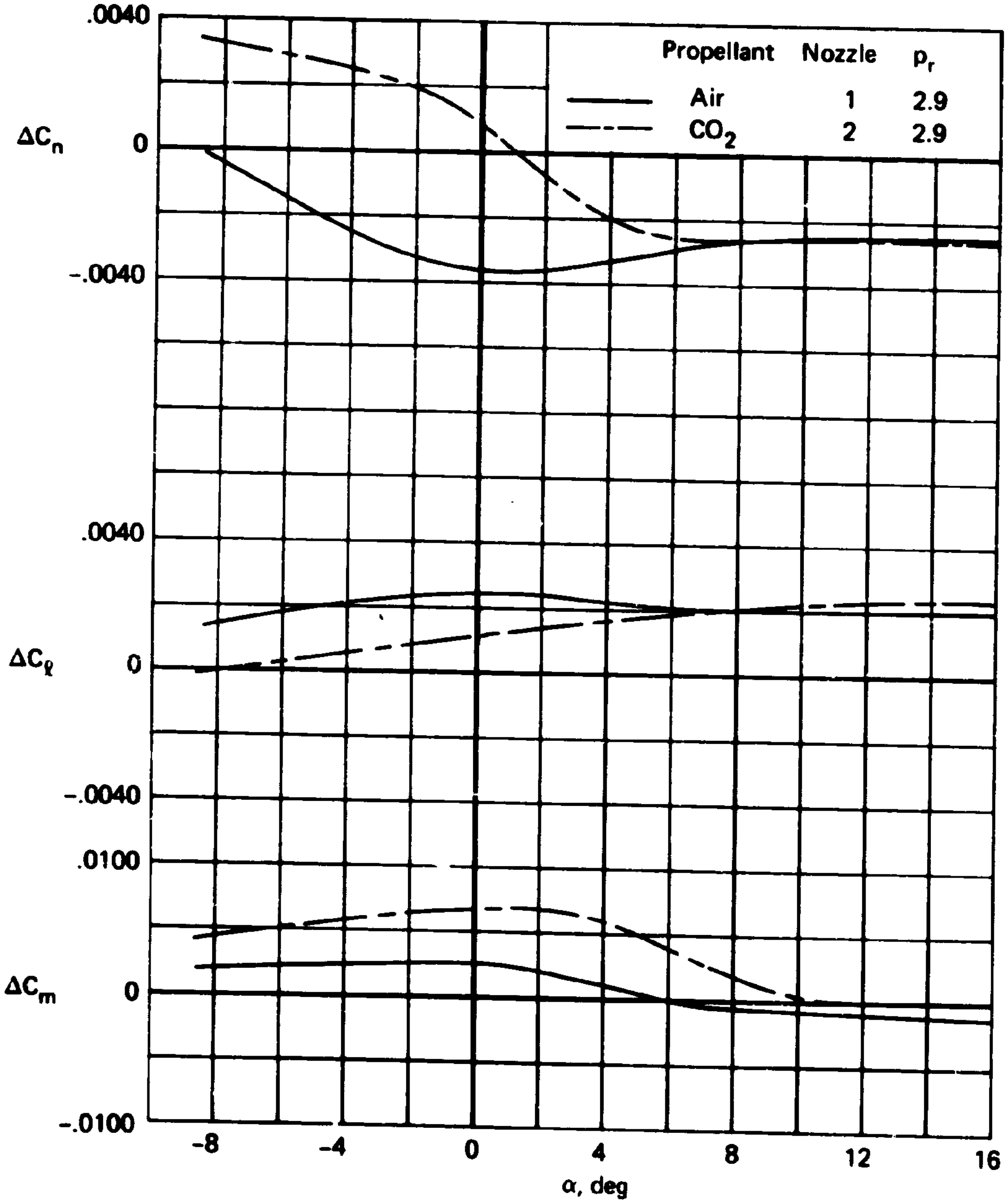
(a) $M = 0.6$, $Re = 1.20\times10^6$.

Figure 9.- Comparison of jet simulations: $\frac{s}{b/2_L} = 0.61$, $\frac{s}{b/2_R} = 0.92$, $\delta_t = 15°$, $\delta_u = -20°$, $\delta_l = 35°$.



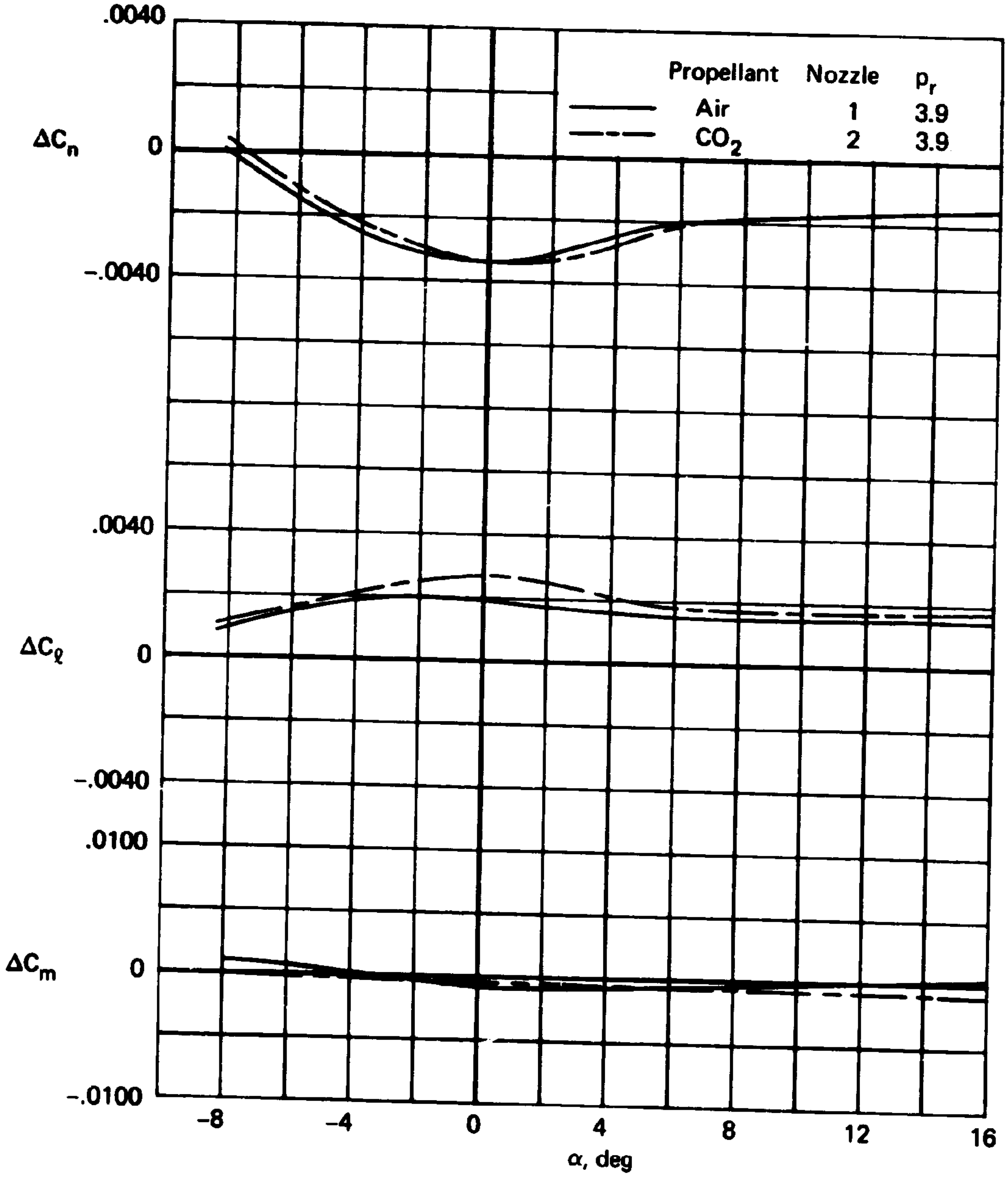
(b) $M = 0.8$, $Re = 1.44 \times 10^6$

Figure 9.- Continued.



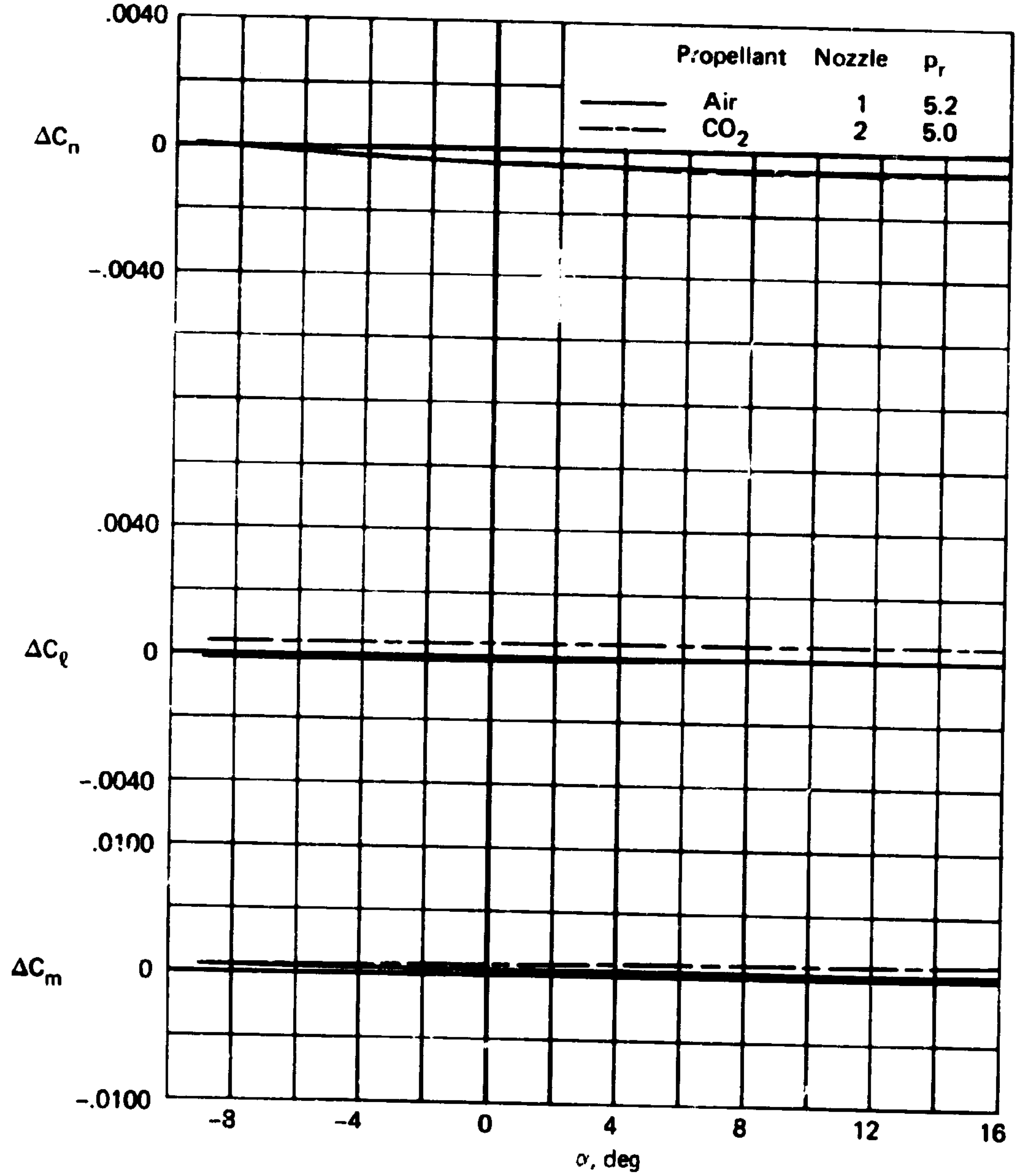
(c) M = 0.9, Re = 1.50×10^6

Figure 9.- Continued.



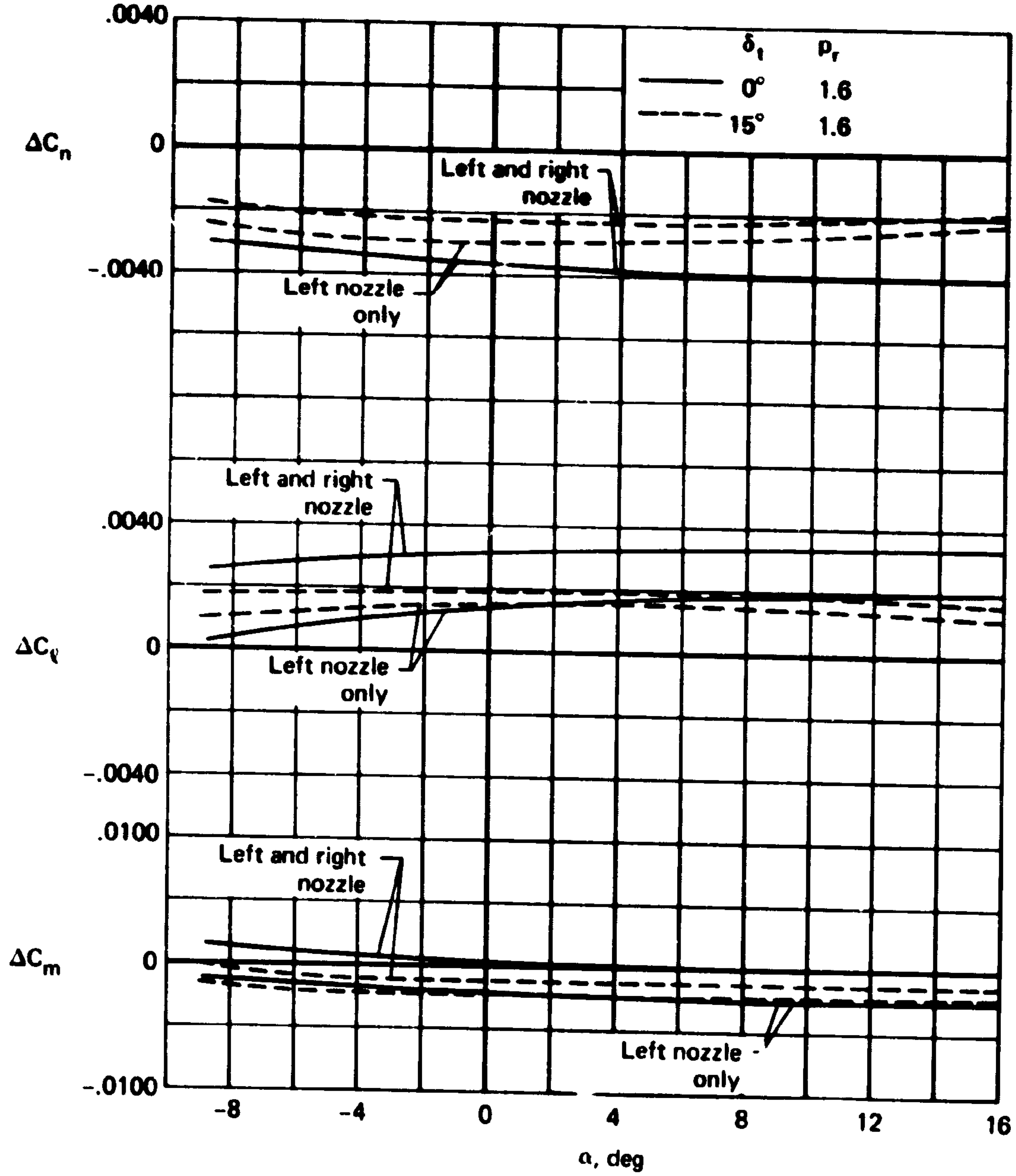
(d) M = 1.1, Re = 1.56×10^6

Figure 9.- Continued.



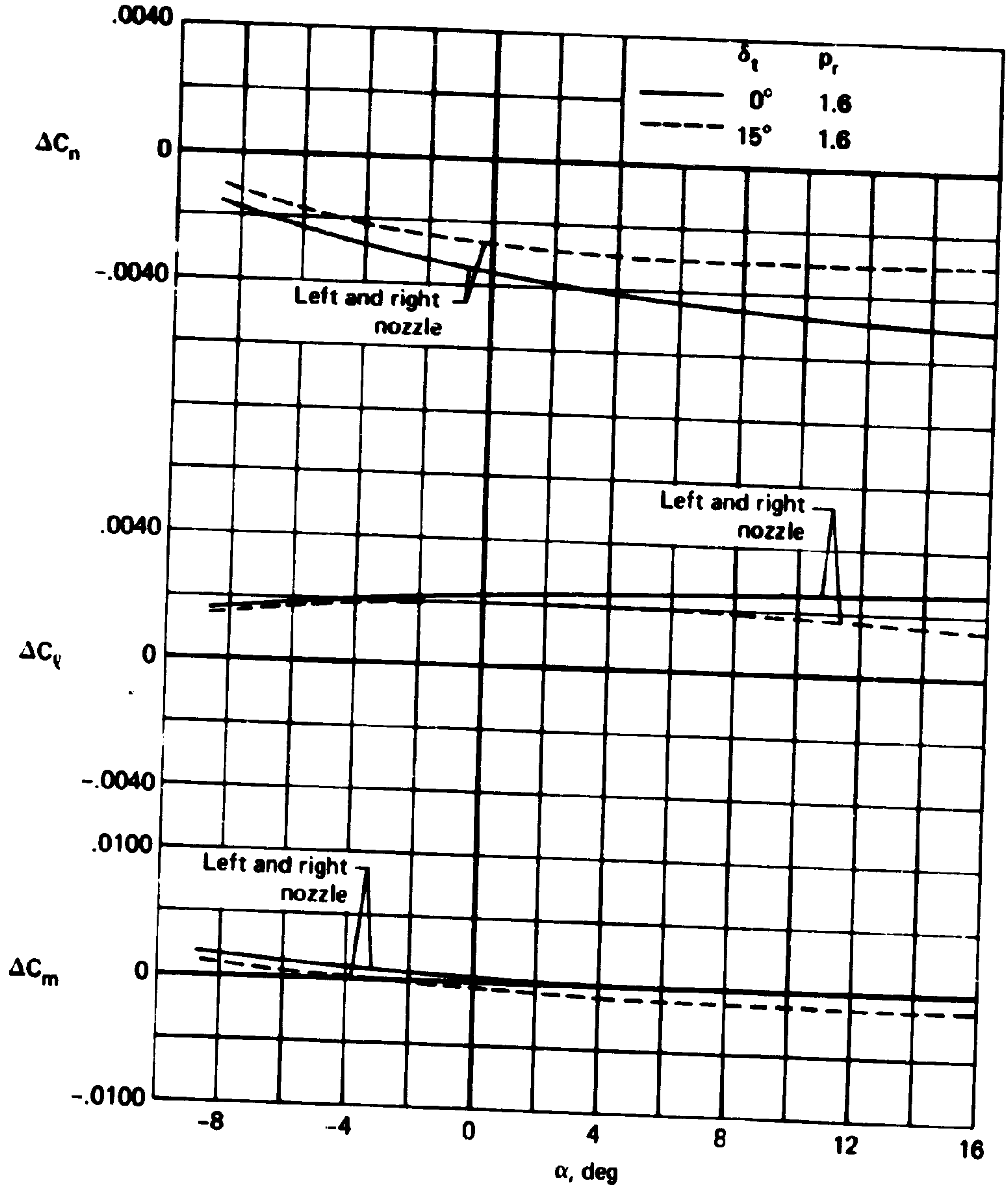
(e) $M = 1.7$, $Re = 1.44\times10^6$

Figure 9.- Concluded.



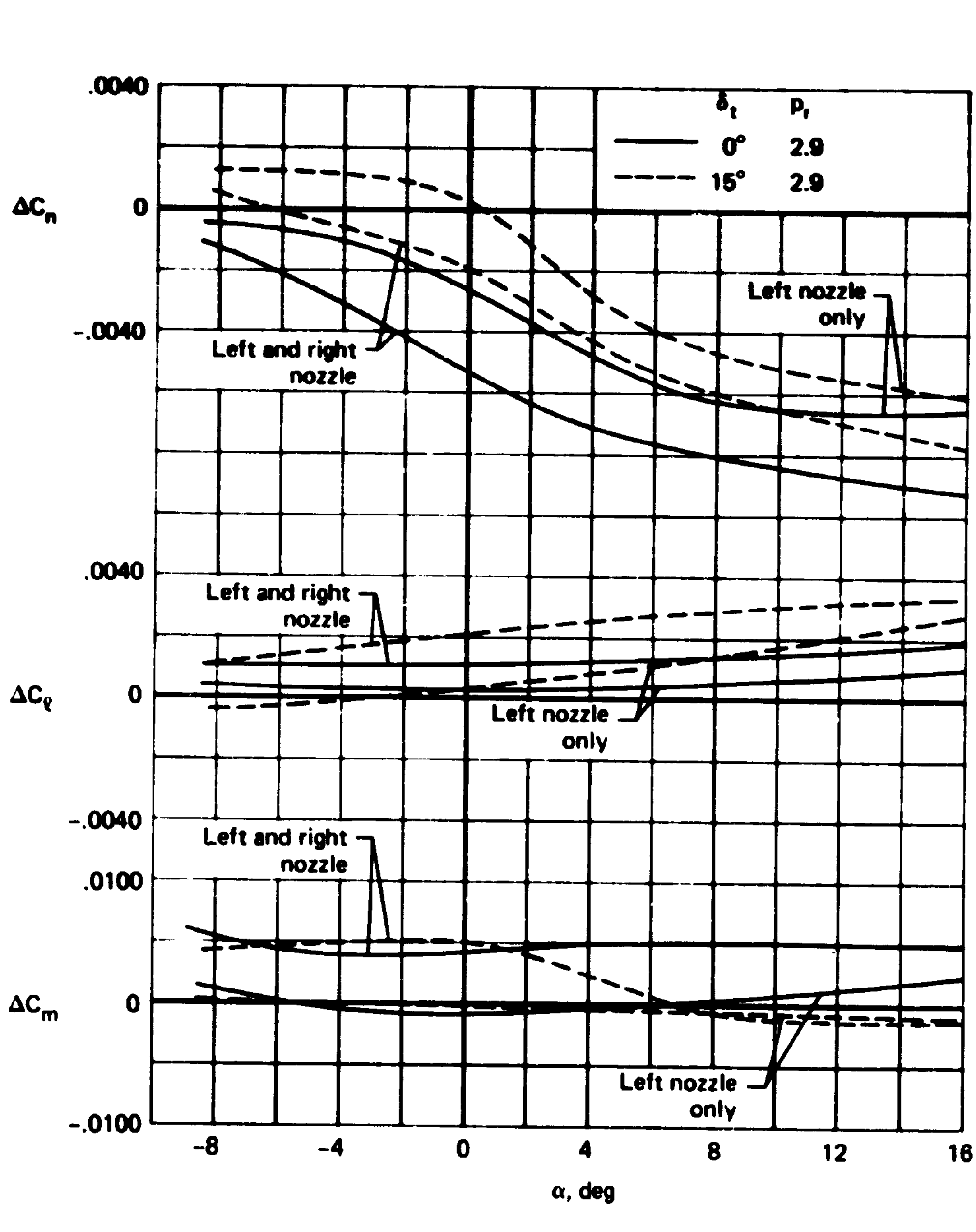
(a) $M = 0.6$, $Re = 1.20 \times 10^6$

Figure 10.- The effect of 15° nozzle cant on the jet interactions: $\frac{s}{b/2}_{L+R} = 0.92$, $\delta_u = -20°$, $\delta_l = 35°$, air.



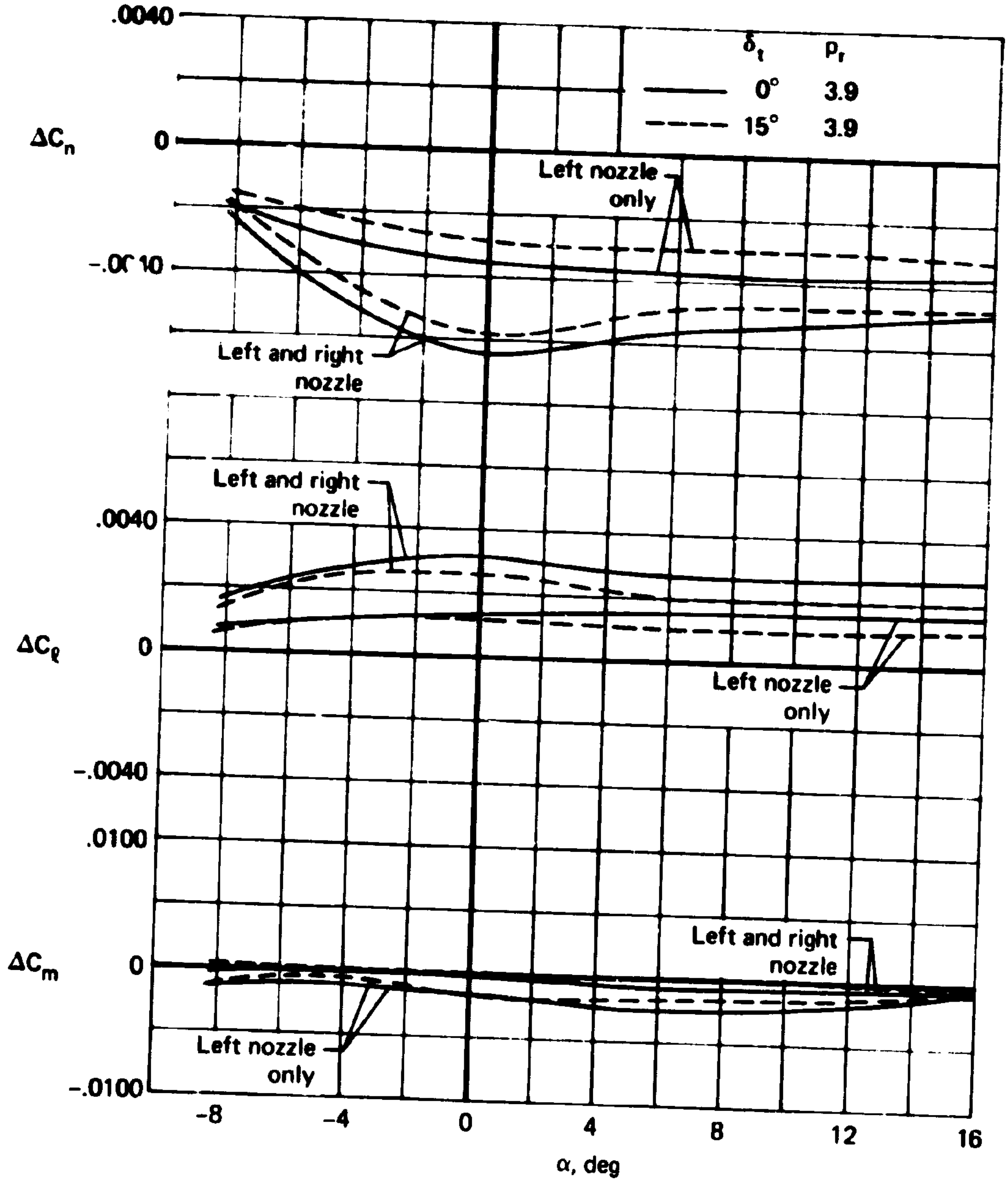
(b) M = 0.8, Re = 1.44×10^6

Figure 10.- Continued.



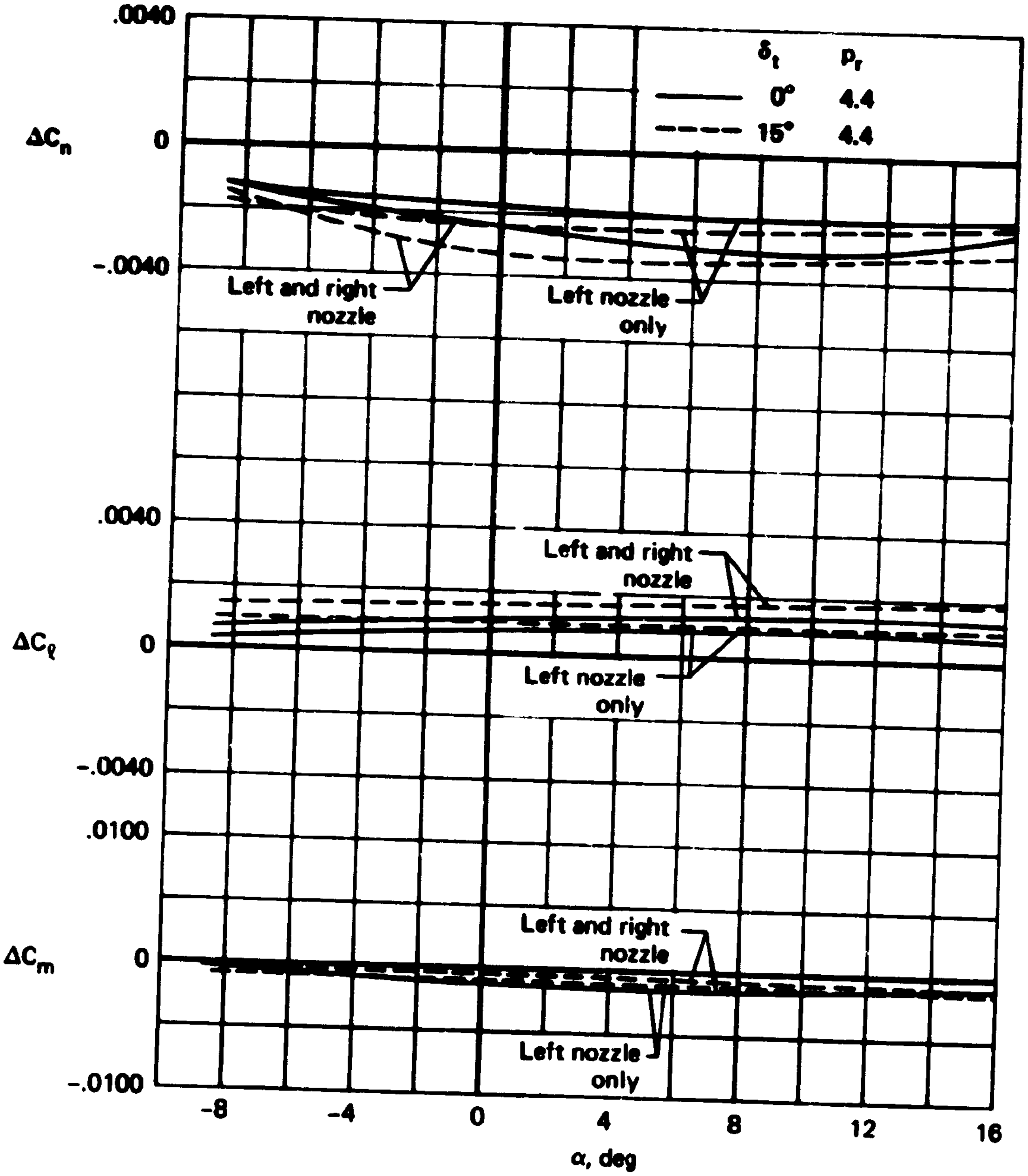
(c) M = 0.9, Re = 1.50×10^6

Figure 10.- Continued.



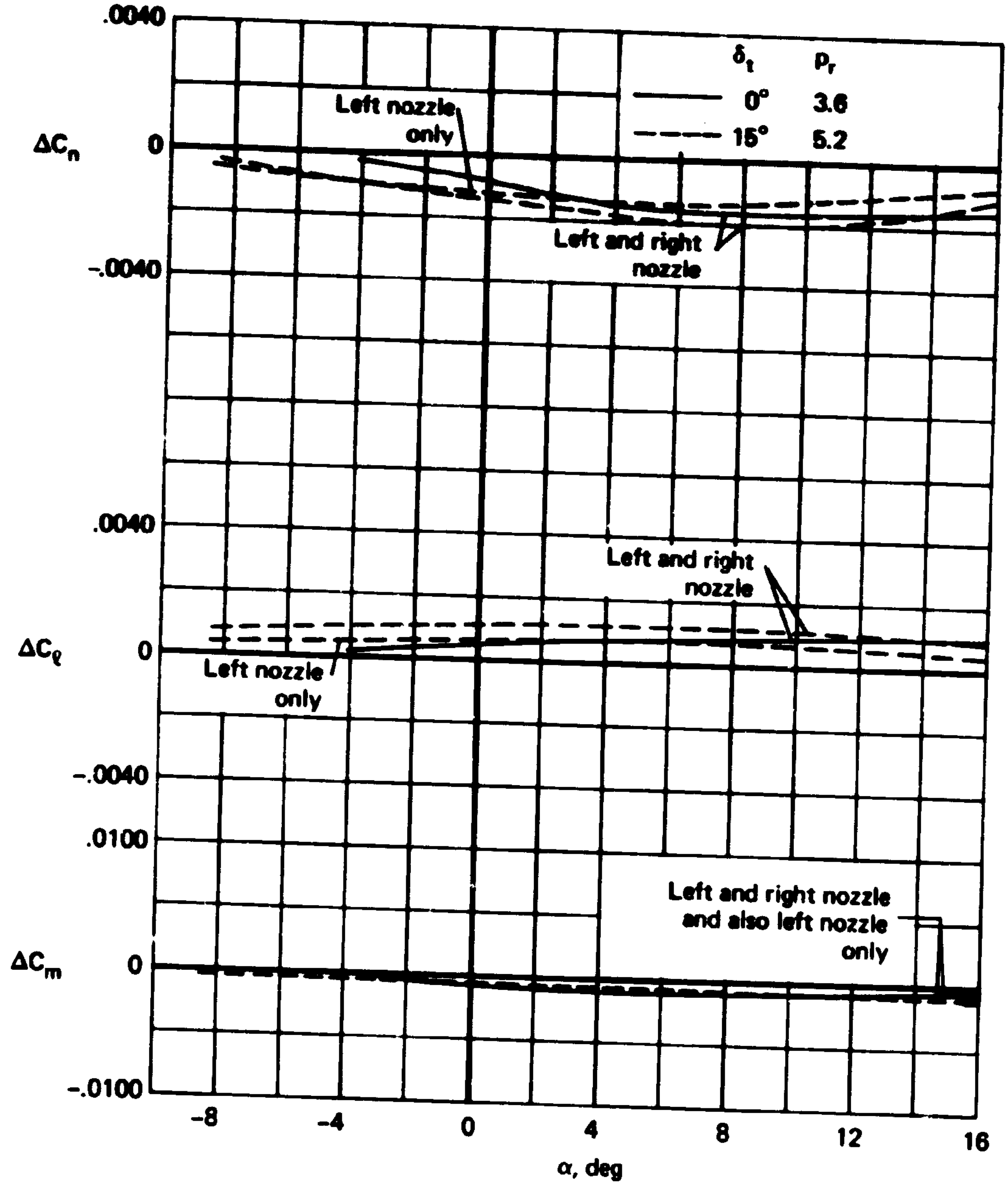
(d) M = 1.1, Re = 1.56×10⁶

Figure 10.- Continued.



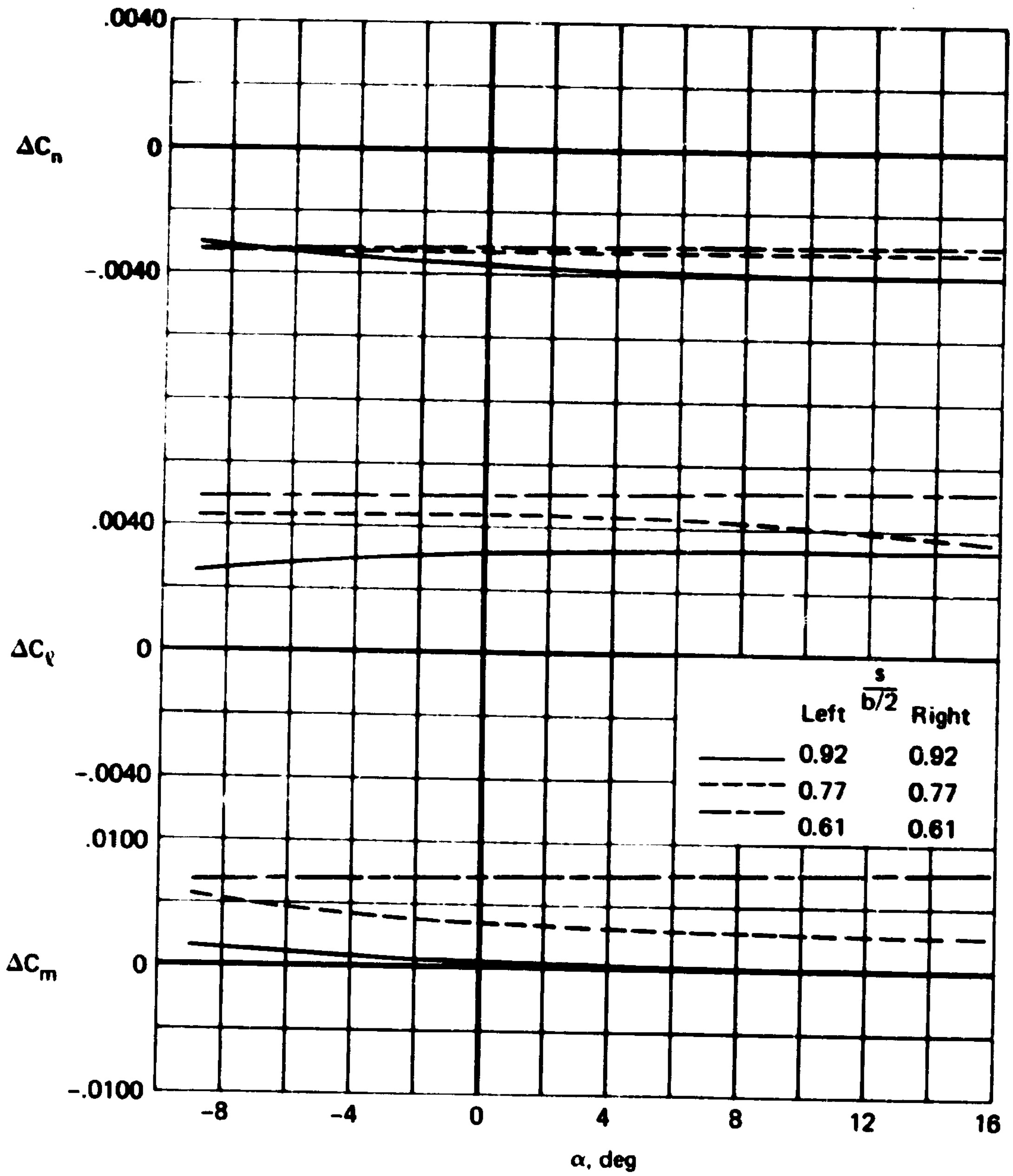
(e) M = 1.3, Re = 1.56×10⁶.

Figure 10.- Continued.



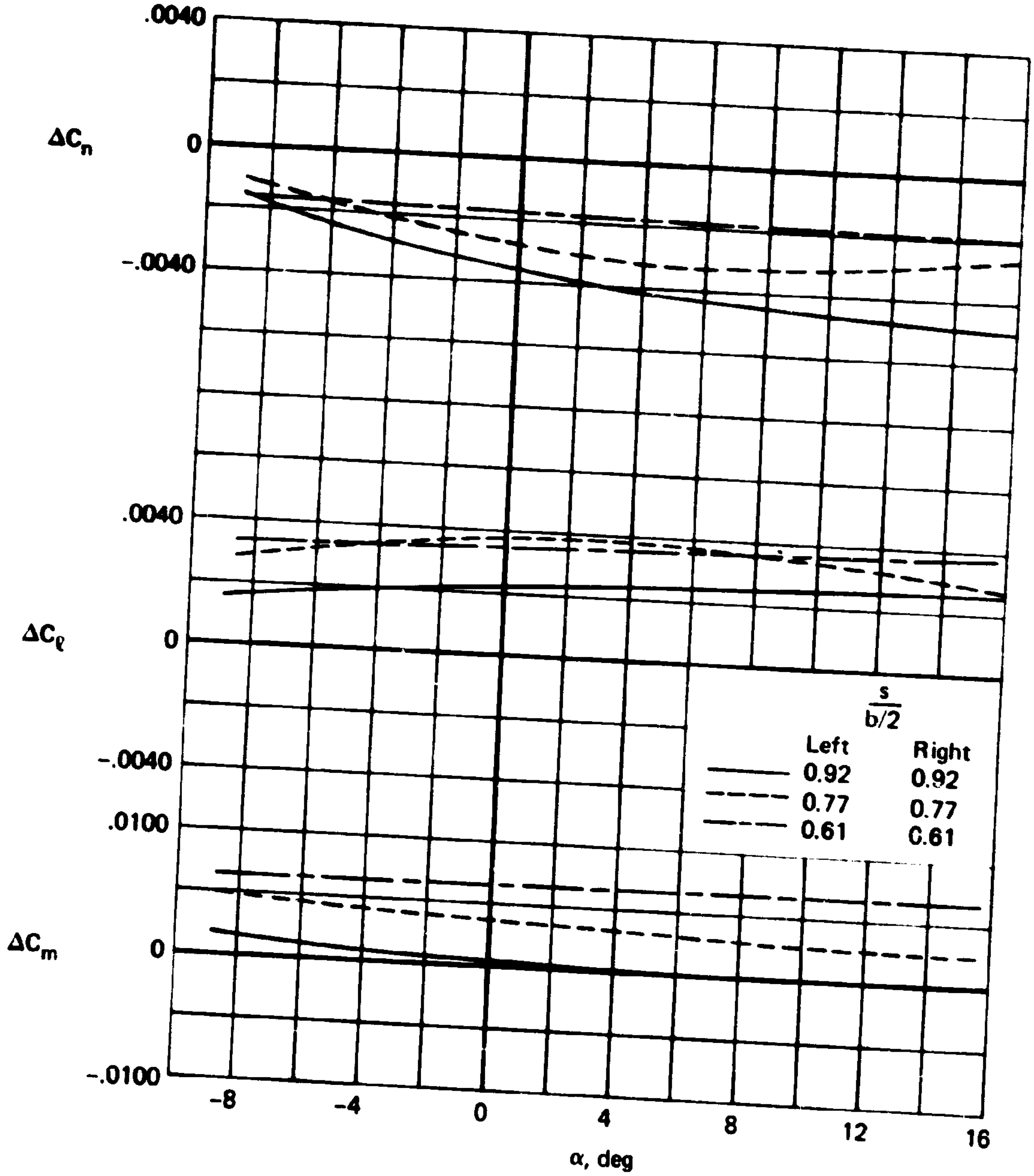
(f) M = 1.7, Re = 1.44×10^6

Figure 10.- Concluded.



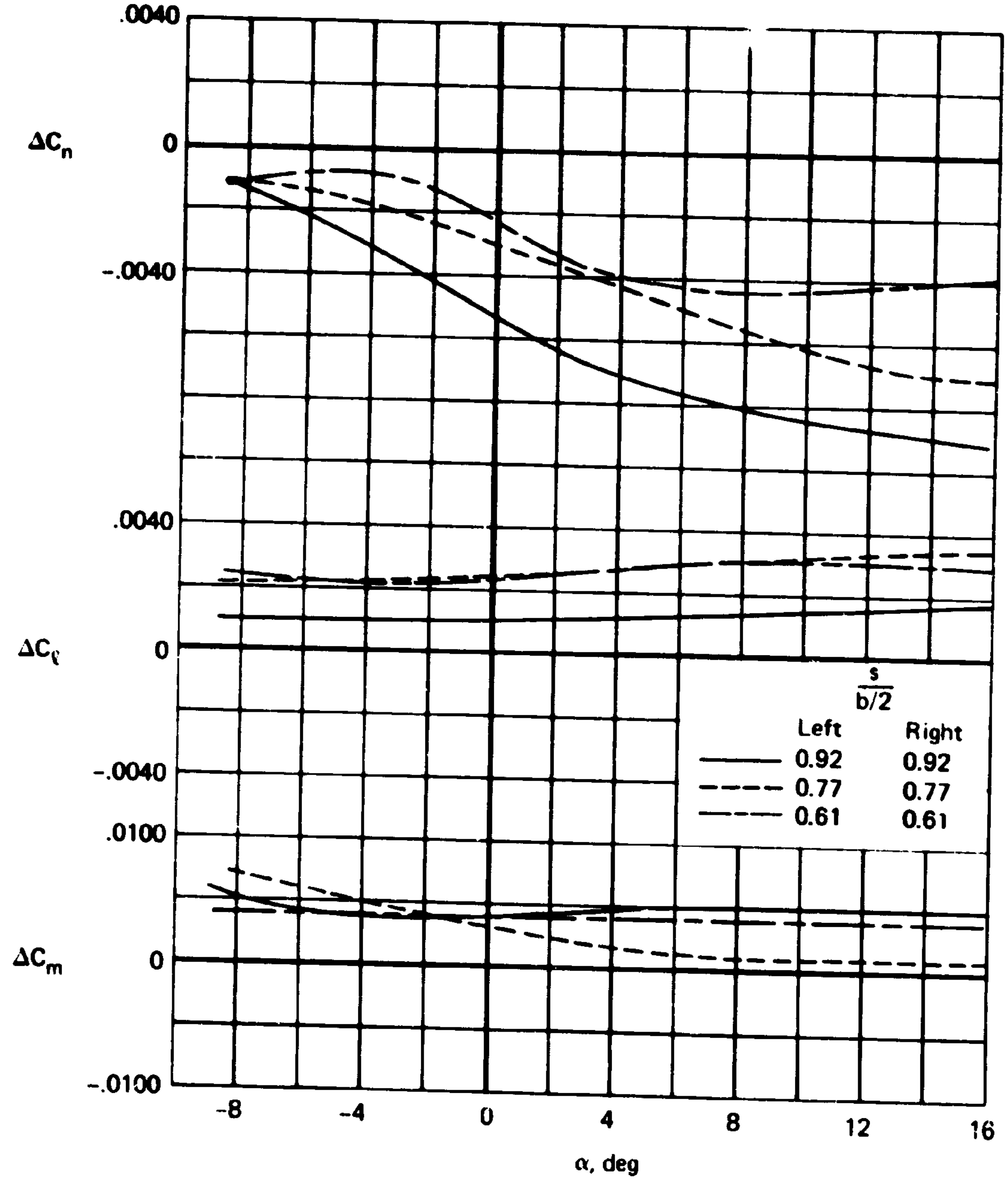
(a) M = 0.6, Re = 1.20×10^6.

Figure 11.- The effect of spanwise location on the jet interactions through the angle of attack range: $\delta_t = 0°$, $\delta_u = -20°$, $\delta_l = 35°$, air.



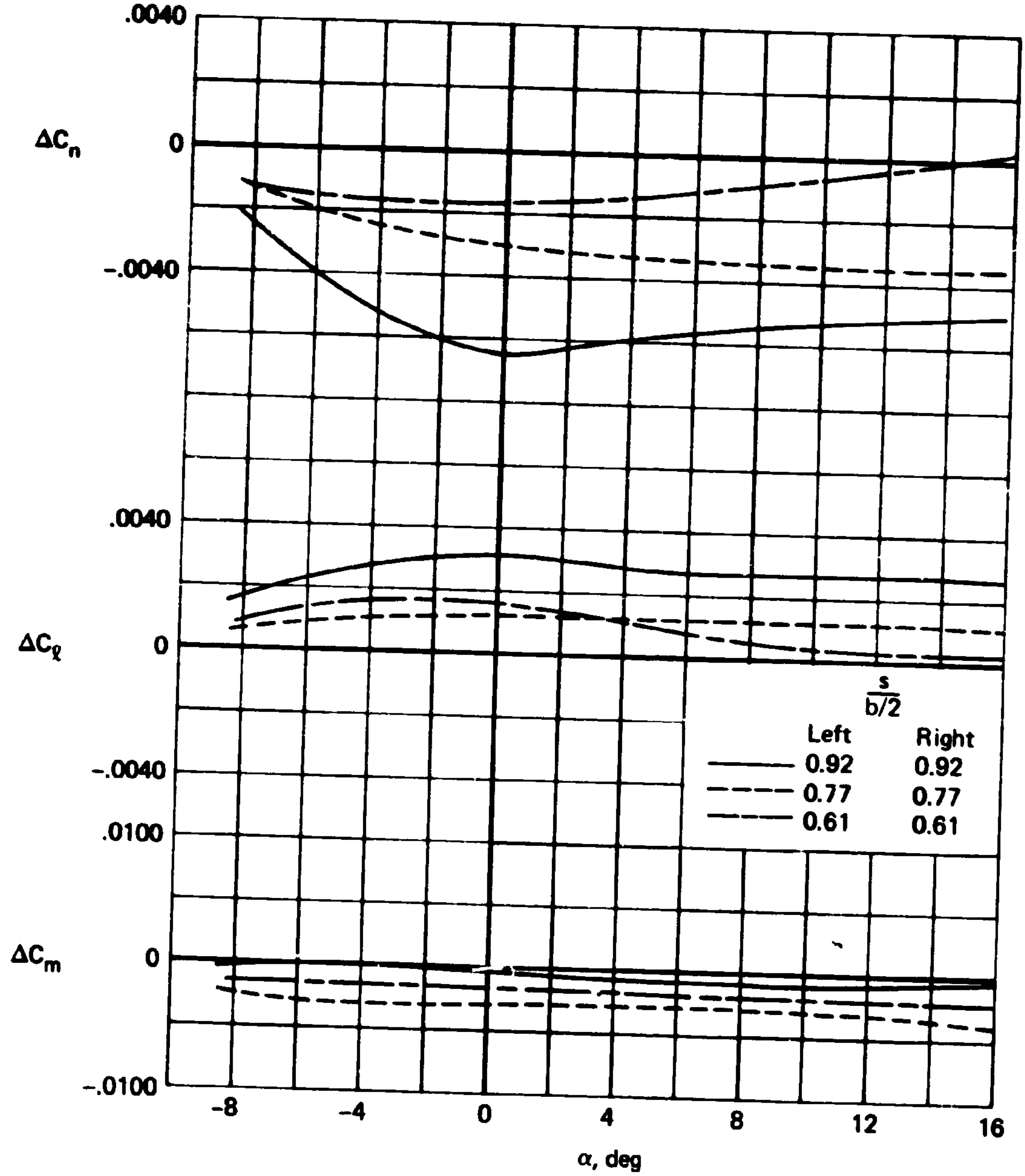
(b) M = 0.8, Re = 1.44×10^6

Figure 11.- Continued.



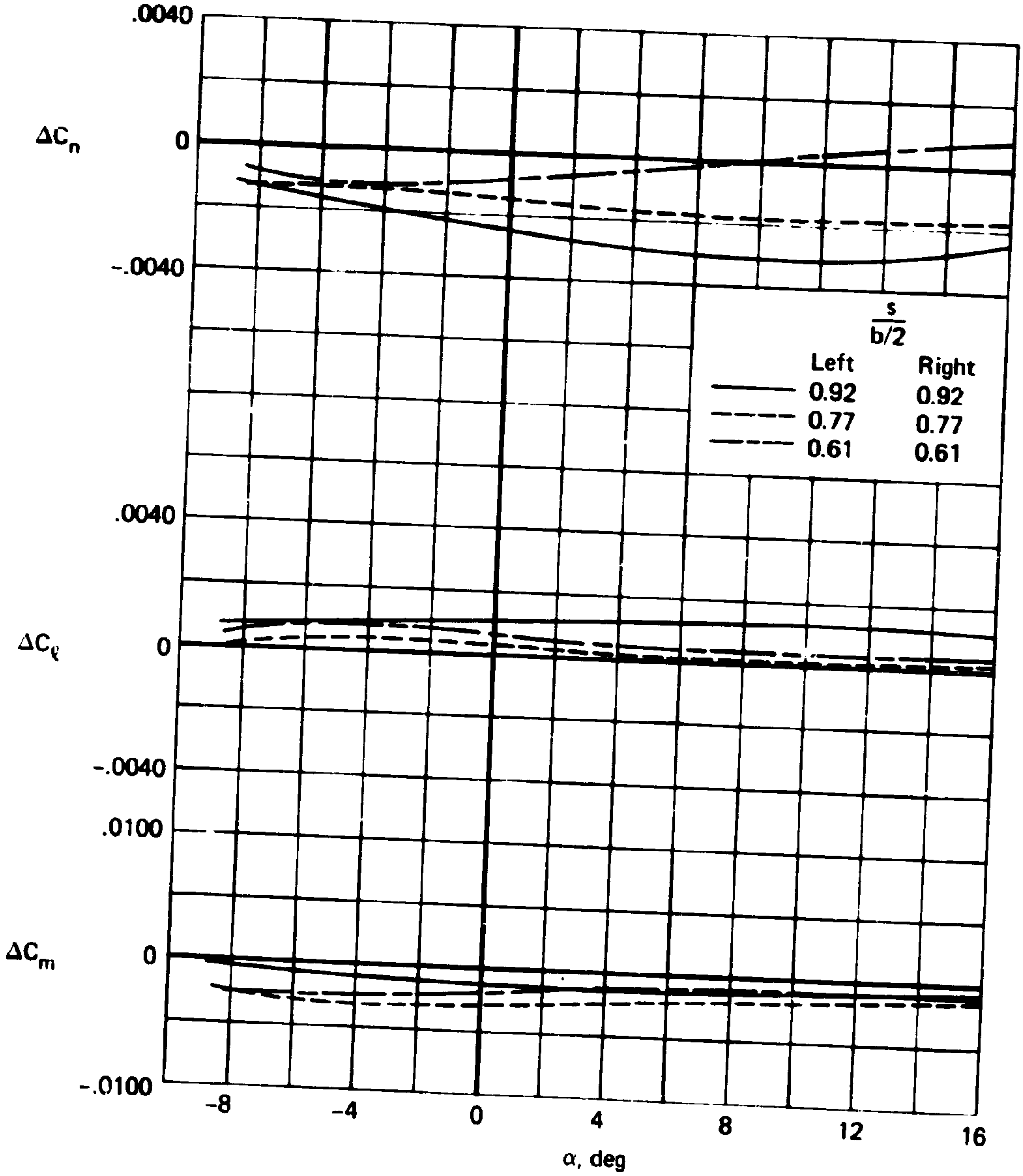
(c) M = 0.9, Re = 1.50×10^6

Figure 11.- Continued.



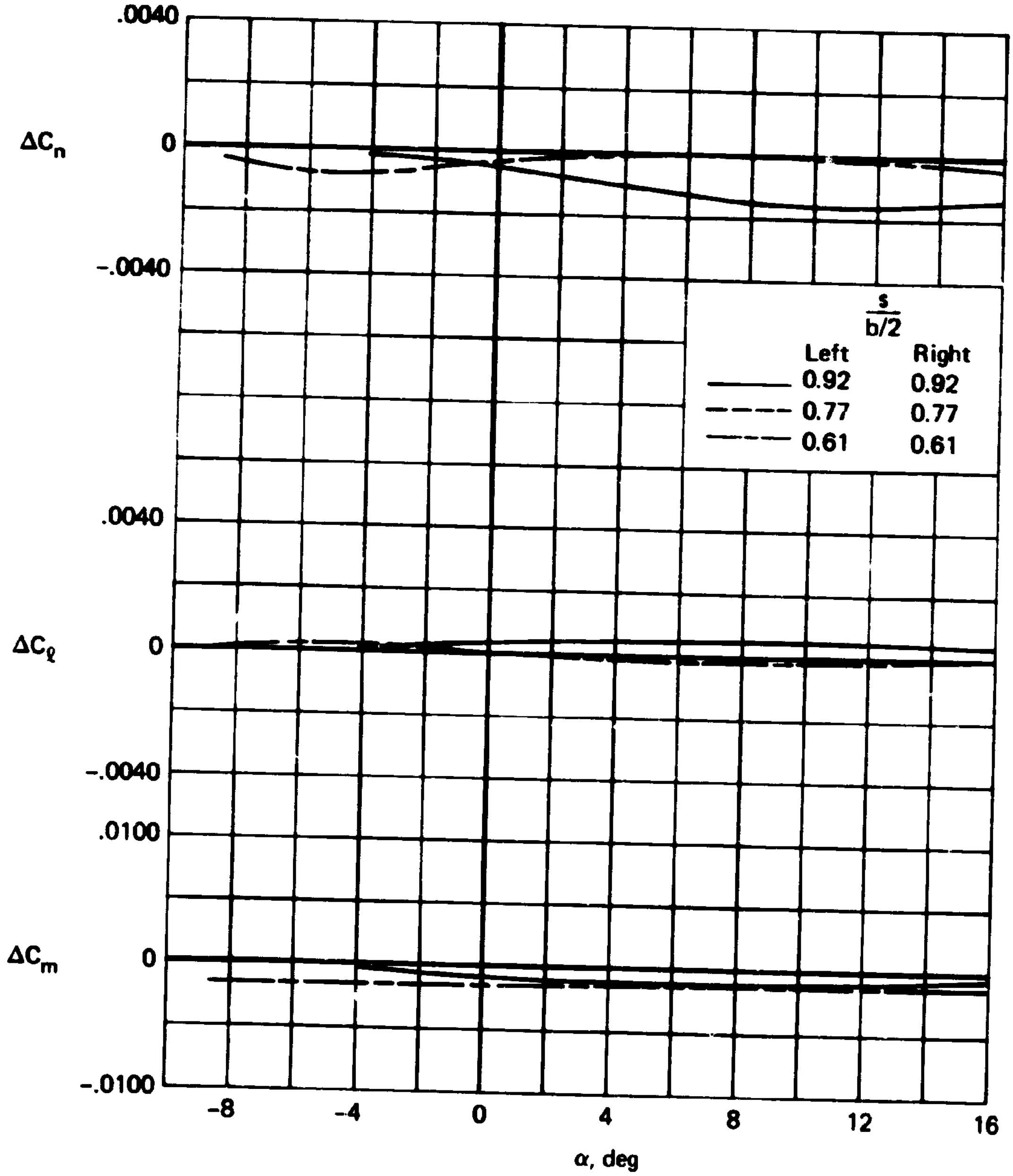
(d) M = 1.1, Re = 1.56×10^6.

Figure 11.- Continued.



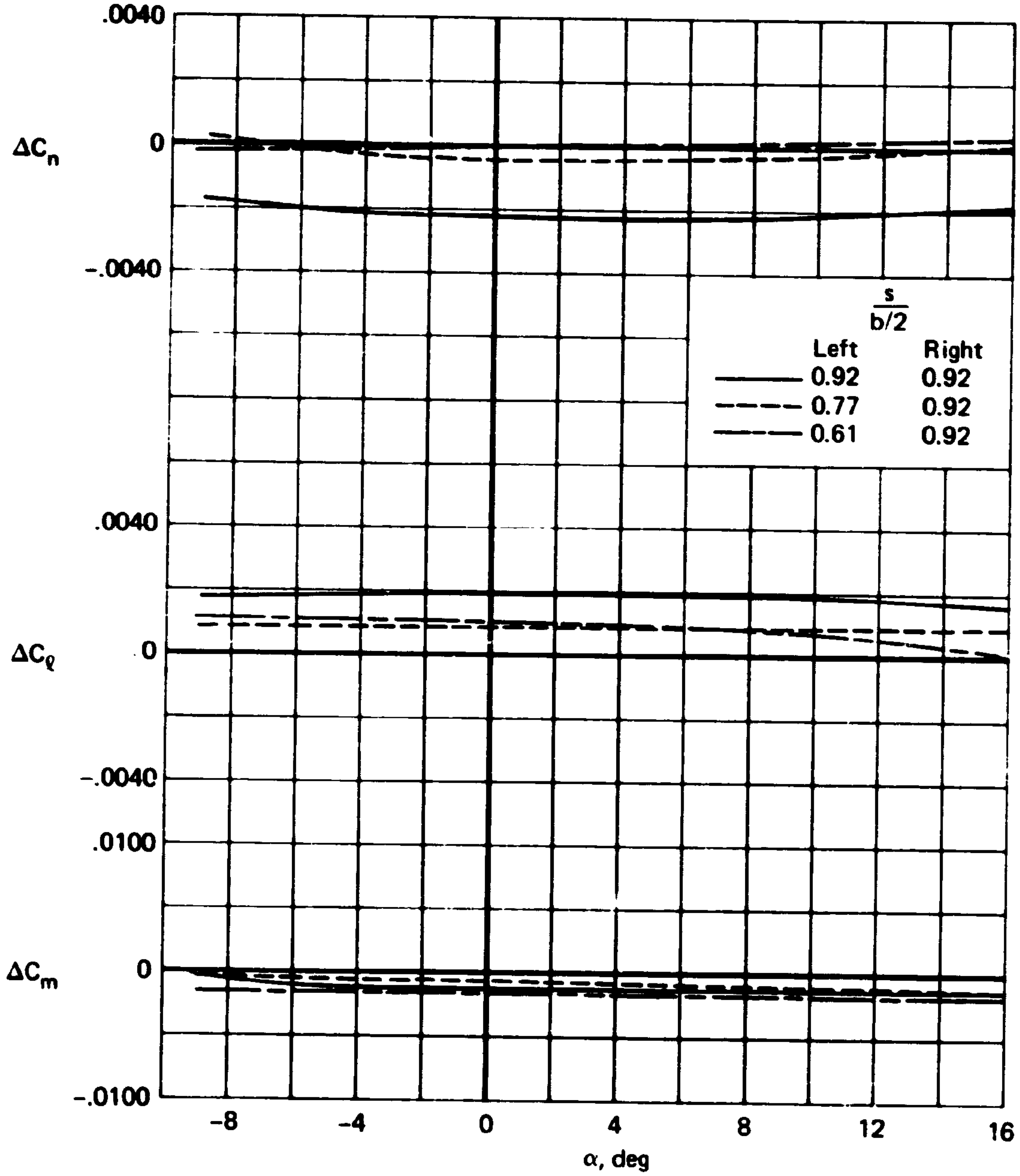
(e) M = 1.3, Re = 1.56×10^6

Figure 11.- Continued.



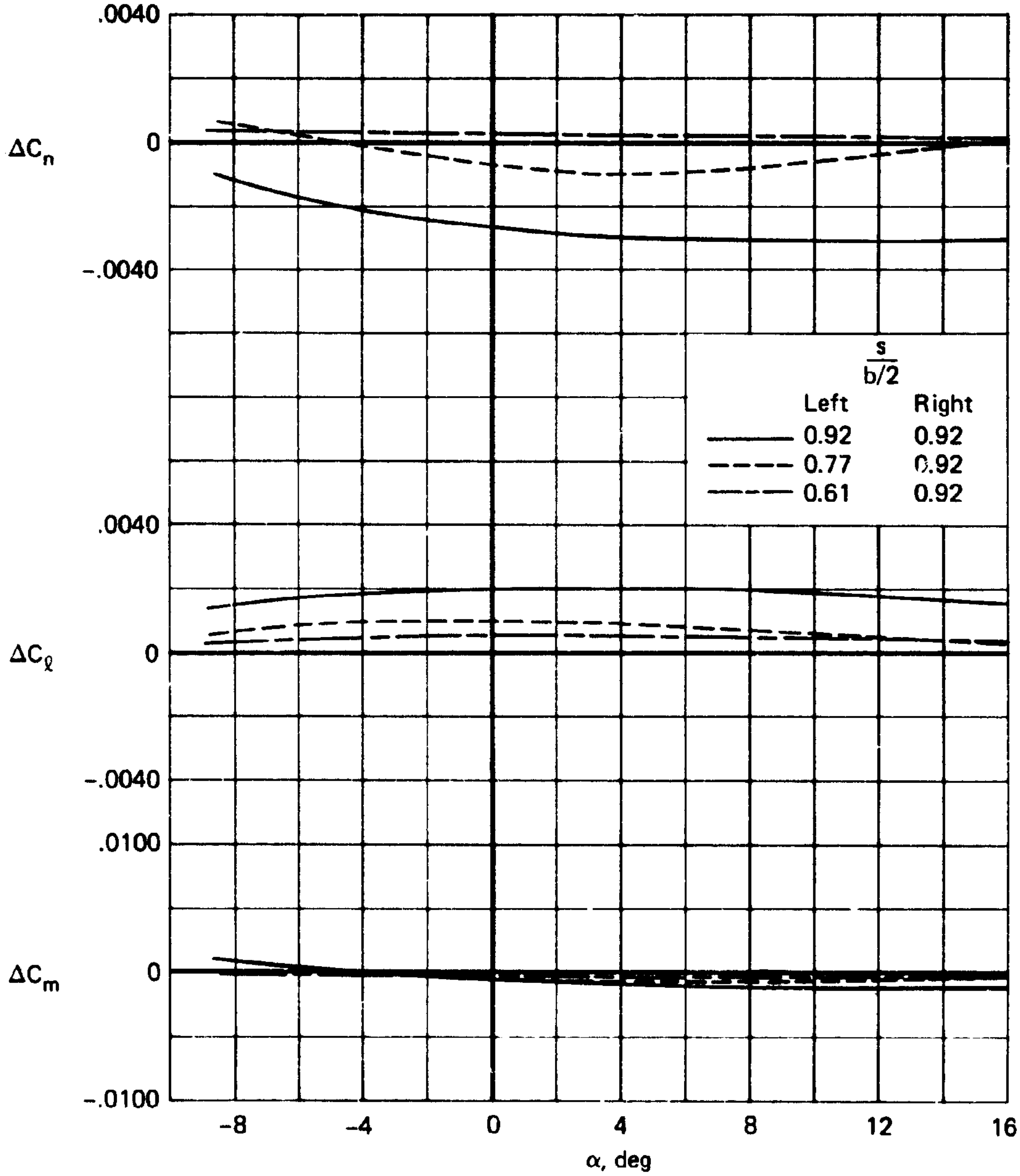
(f) M = 1.7, Re = 1.44×10^6

Figure 11.- Concluded.



(a) M = 0.6, Re = 1.20×10^6

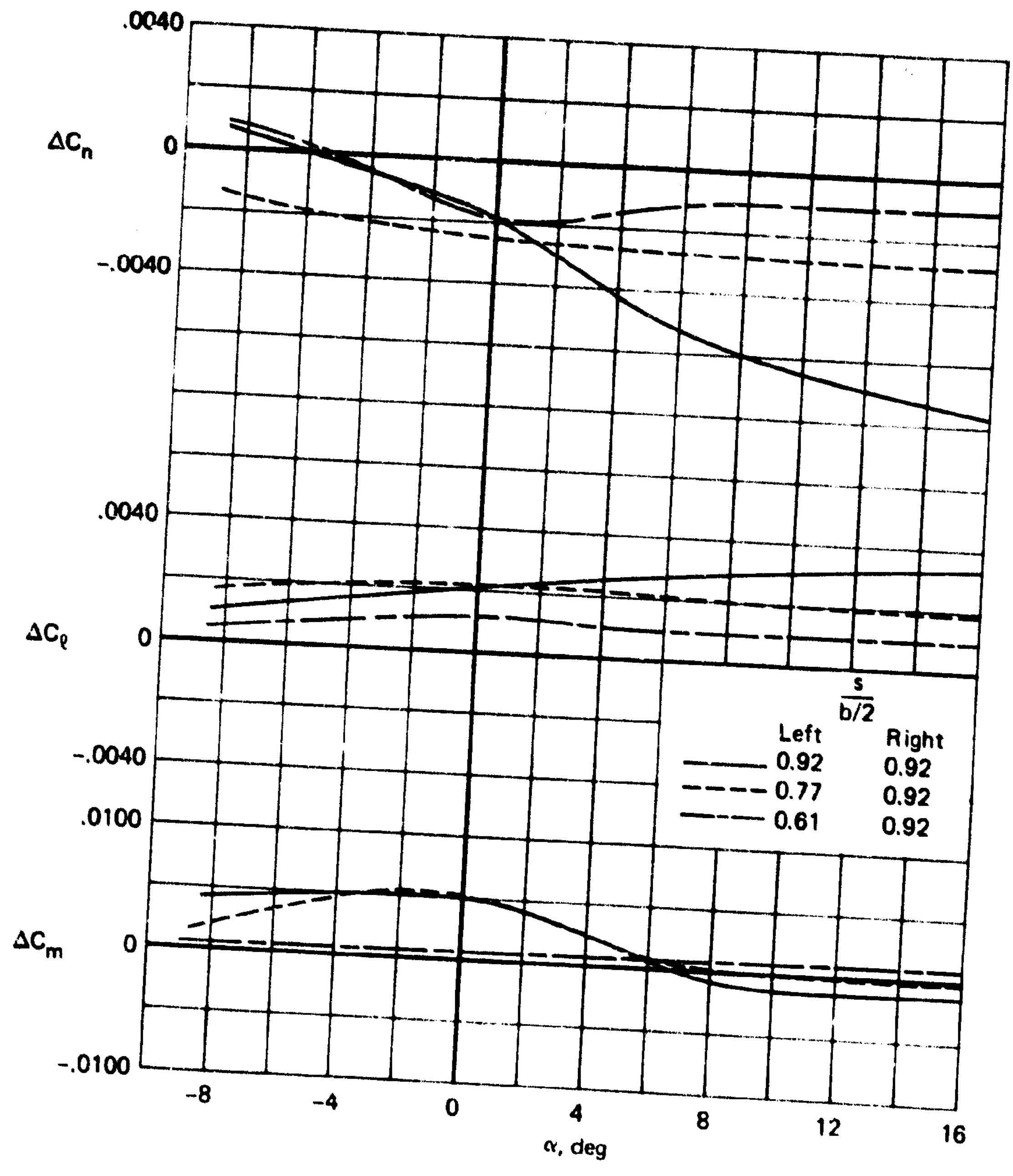
Figure 12.- The effect of spanwise location on the jet interactions through the angle of attack range: δ_t = 15°, δ_u = -20°, δ_l = 35°, air.



(b) M = 0.8, Re = 1.44×10^6

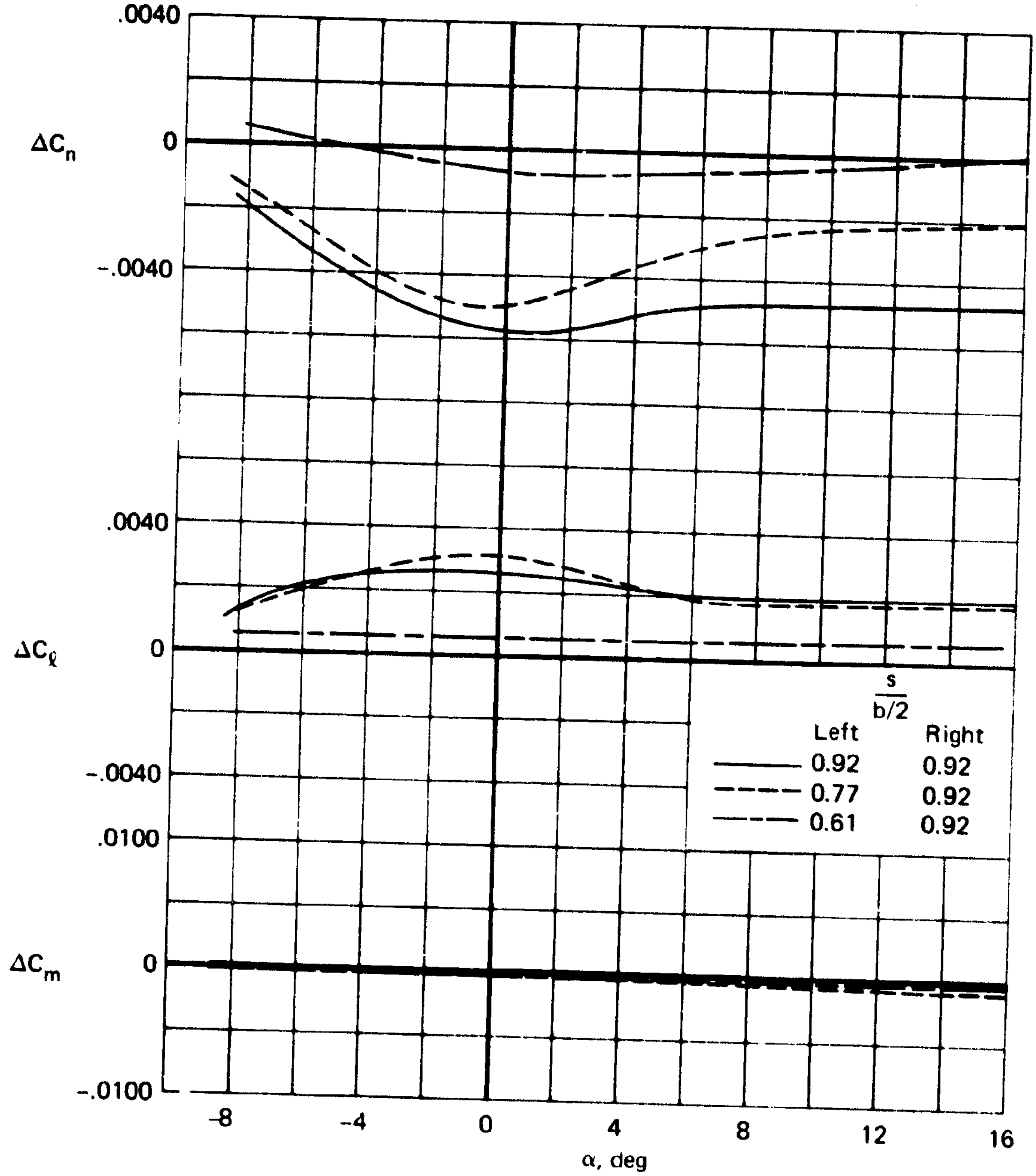
Figure 12.- Continued.

c-2



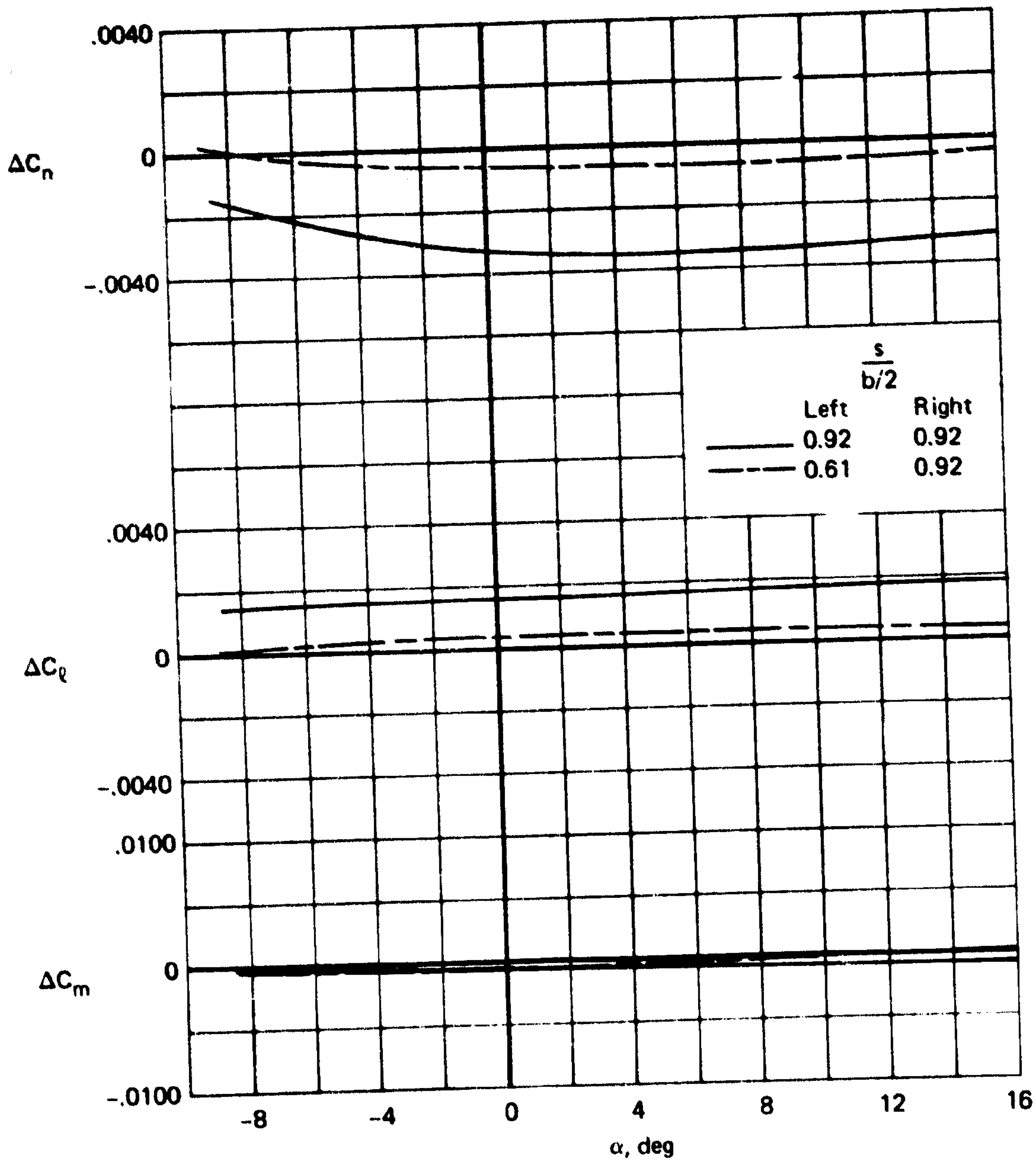
(c) $M = 0.9$, $Re = 1.50 \times 10^6$

Figure 12.- Continued.



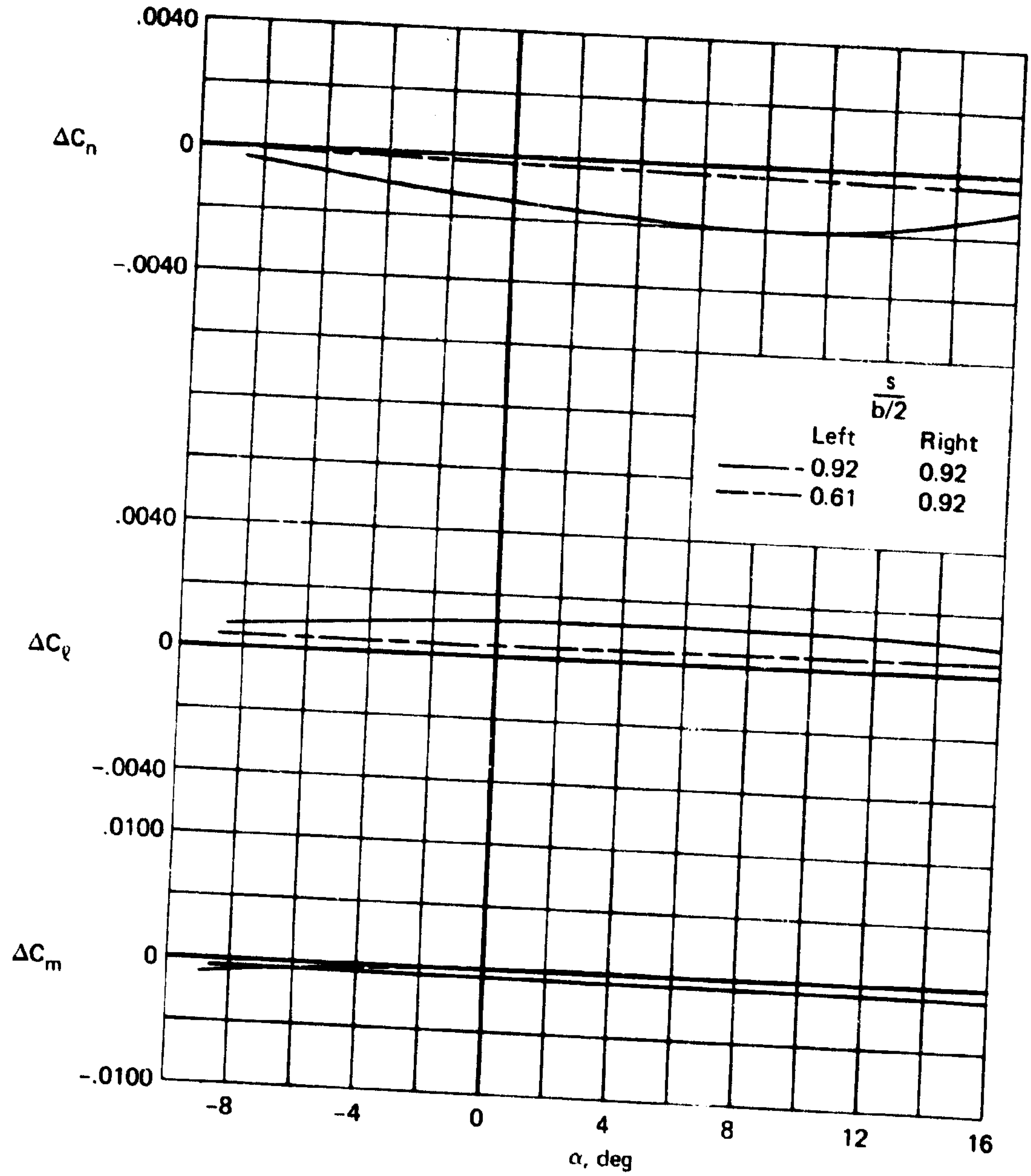
(d) $M = 1.1$, $Re = 1.56 \times 10^6$

Figure 12.- Continued.



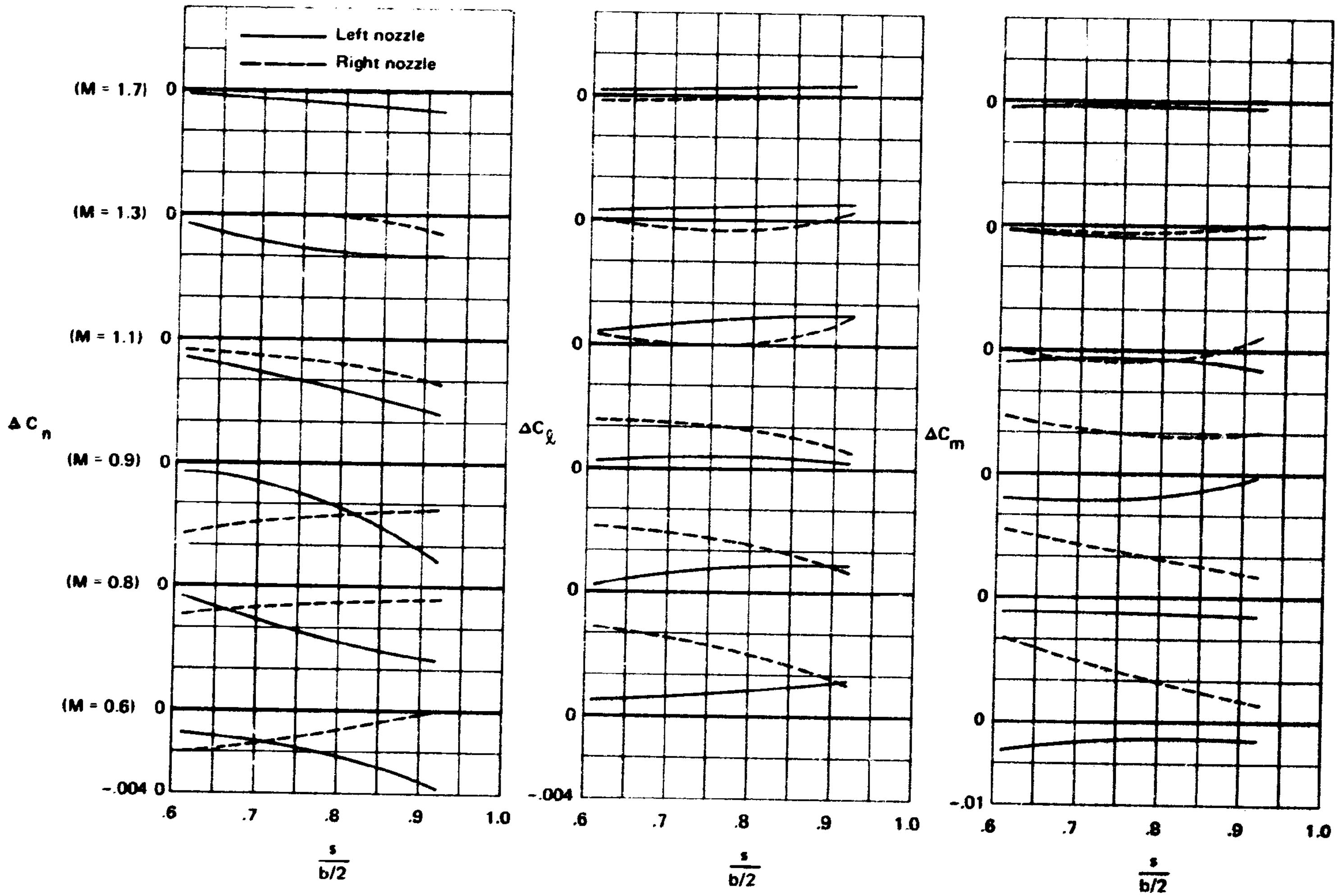
(e) M = 1.3, Re = 1.56×10^6

Figure 12.- Continued.



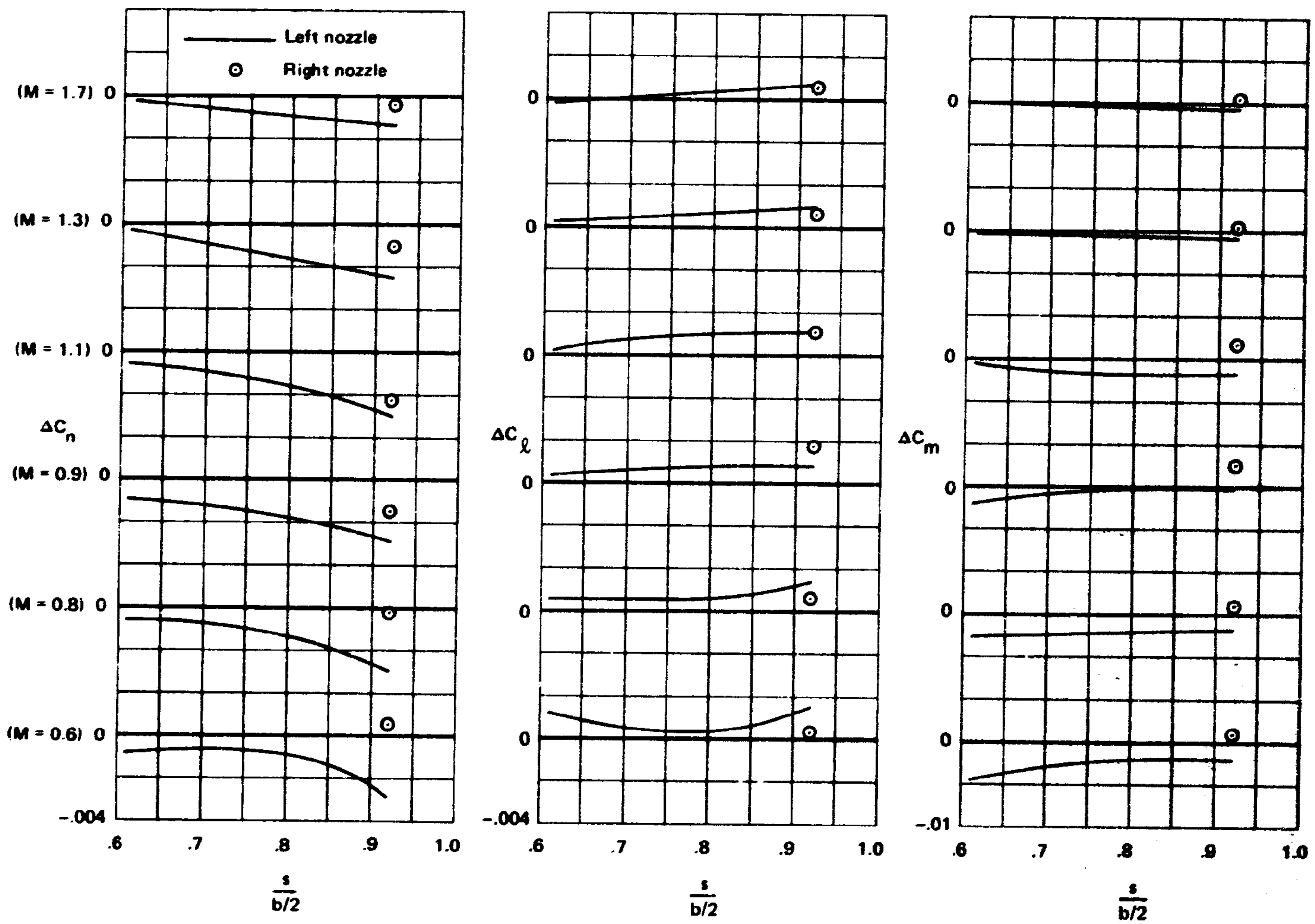
(f) $M = 1.7$, $Re = 1.44 \times 10^6$

Figure 12.- Concluded.



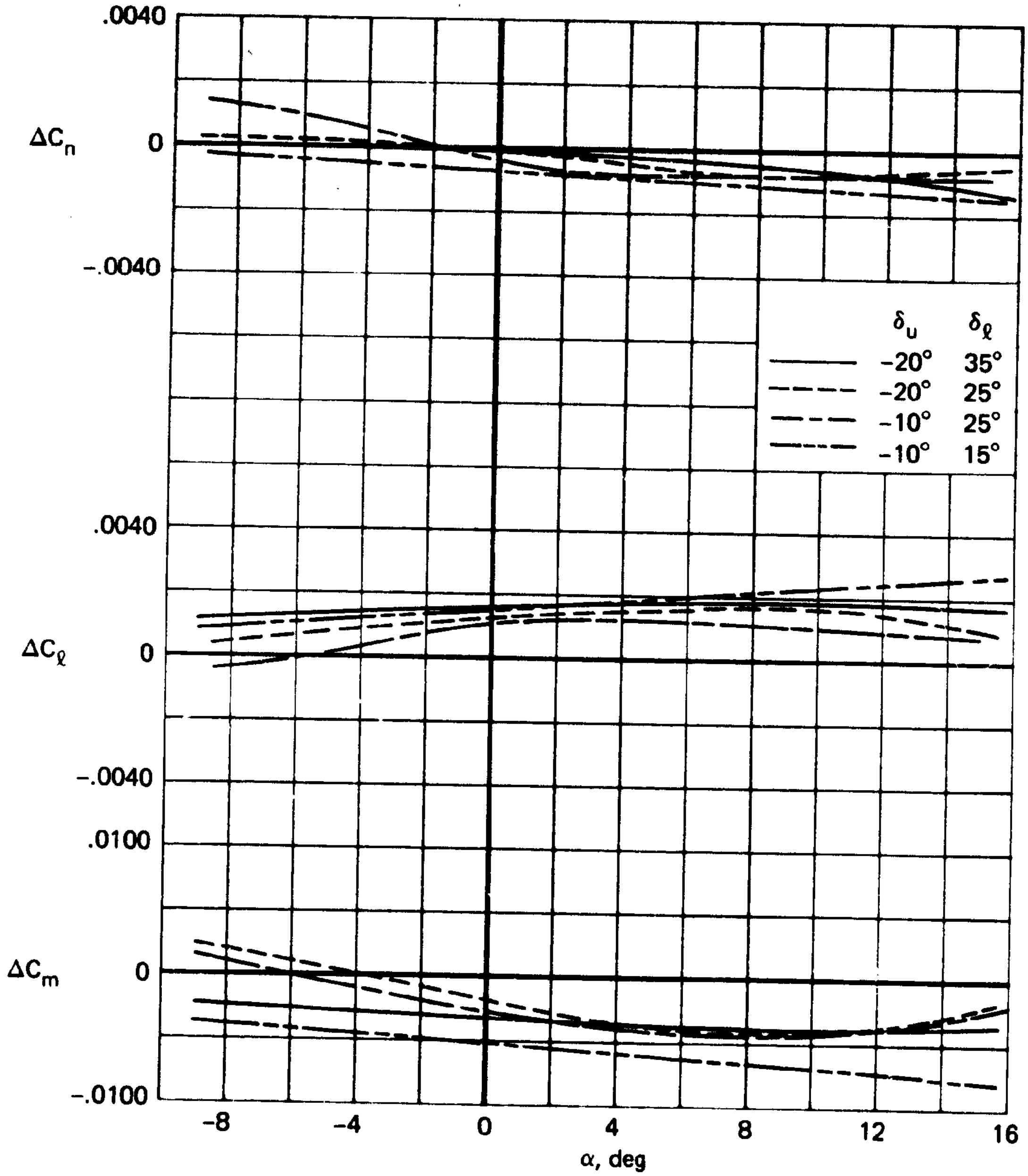
(a) $\delta_t = 0°$

Figure 13.- Variation of the jet interactions with spanwise location: $\alpha = 4°$, $\delta_u = -20°$, $\delta_l = 35°$, air.



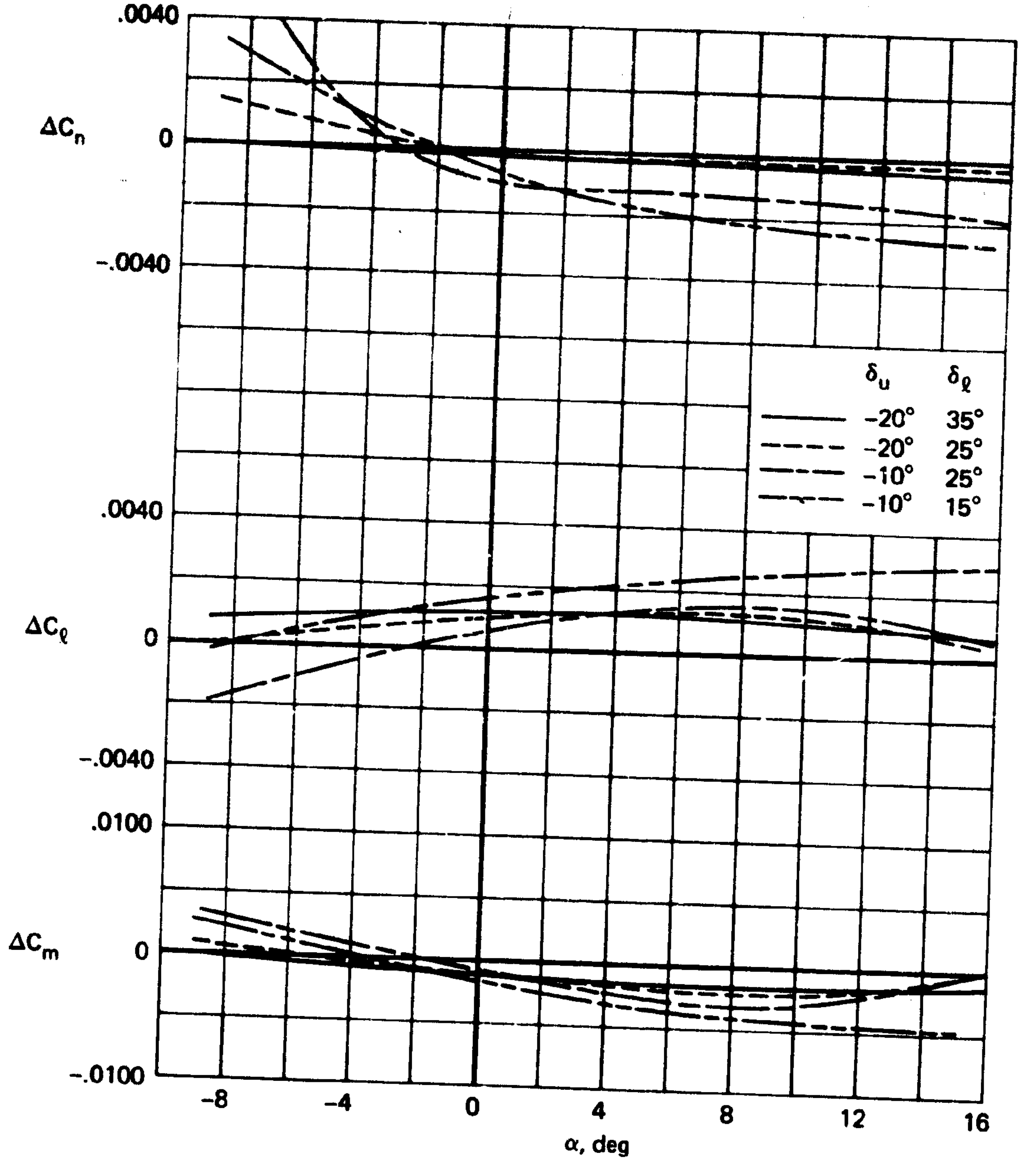
(b) $\delta_t = 15°$.

Figure 13.- Concluded.



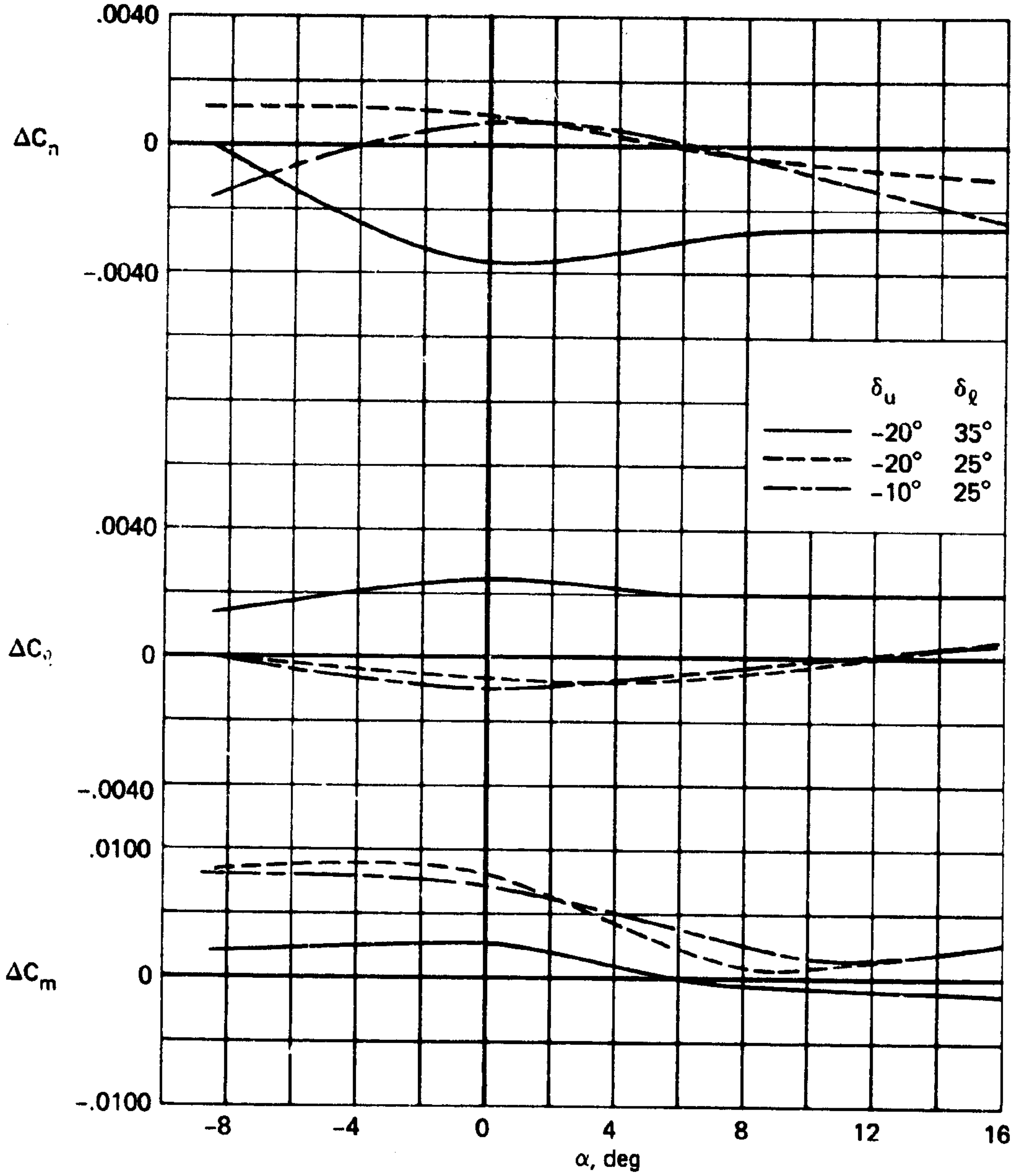
(a) $M = 0.6$, $p_r = 1.6$, $Re = 1.20 \times 10^6$

Figure 14.- The effect of upper and lower flap deflection on the jet interactions: $\frac{s}{b/2_L} = 0.61$, $\frac{s}{b/2_R} = 0.92$, $\delta_t = 15°$, air.



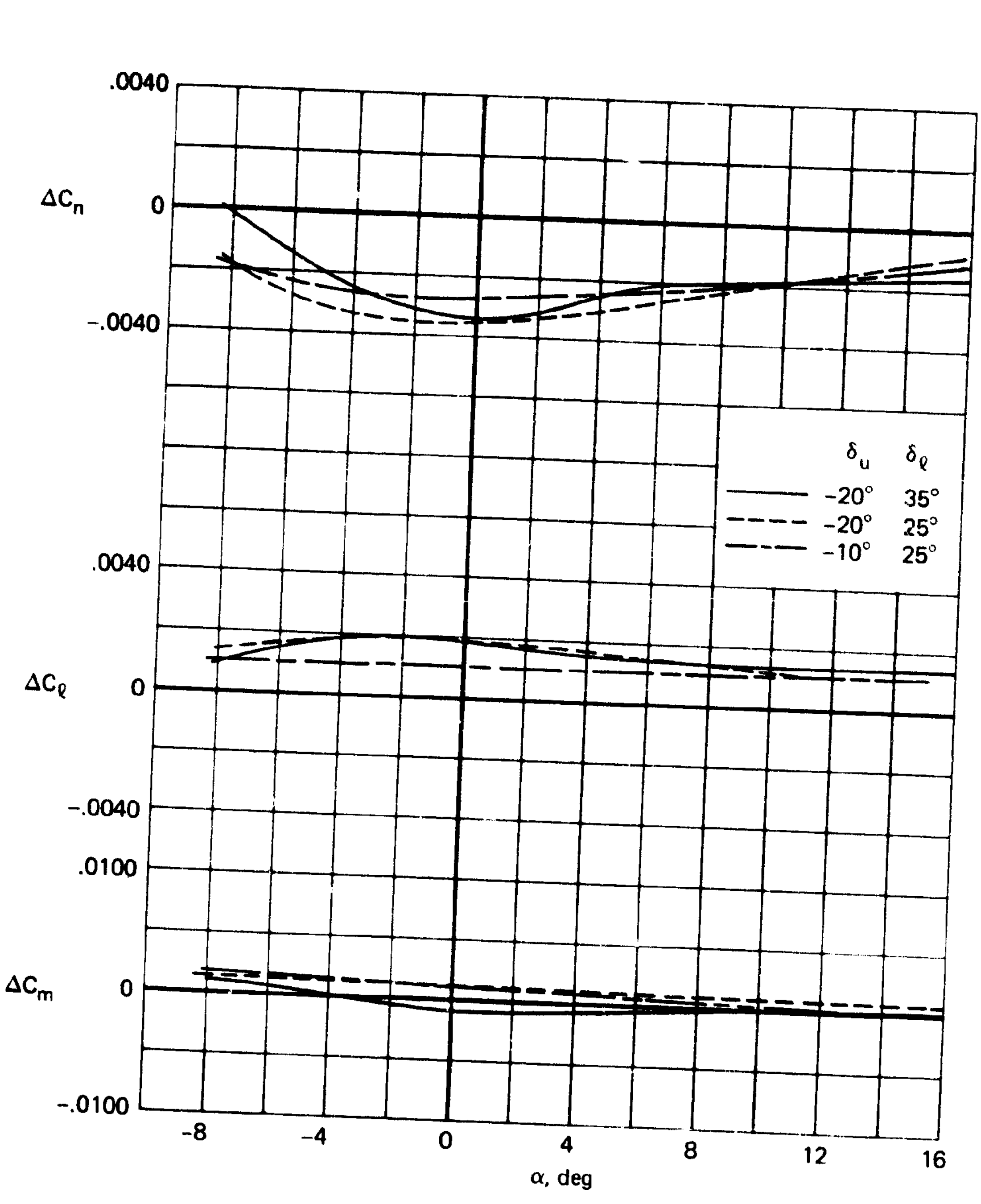
(b) $M = 0.8$, $p_r = 1.6$, $Re = 1.44 \times 10^6$

Figure 14.- Continued.



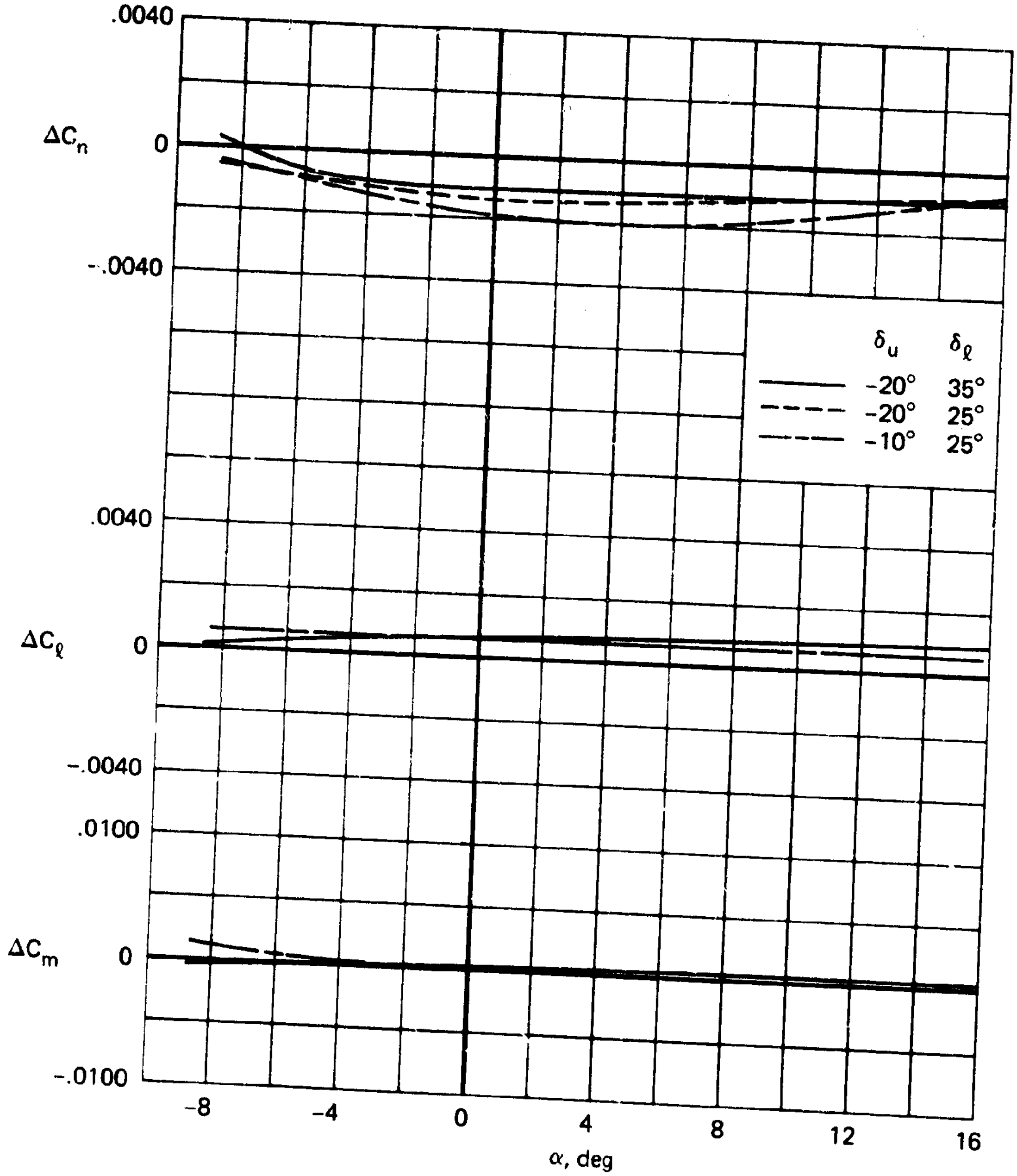
(c) $M = 0.9$, $p_r = 2.9$, $Re = 1.50 \times 10^6$

Figure 14.- Continued.



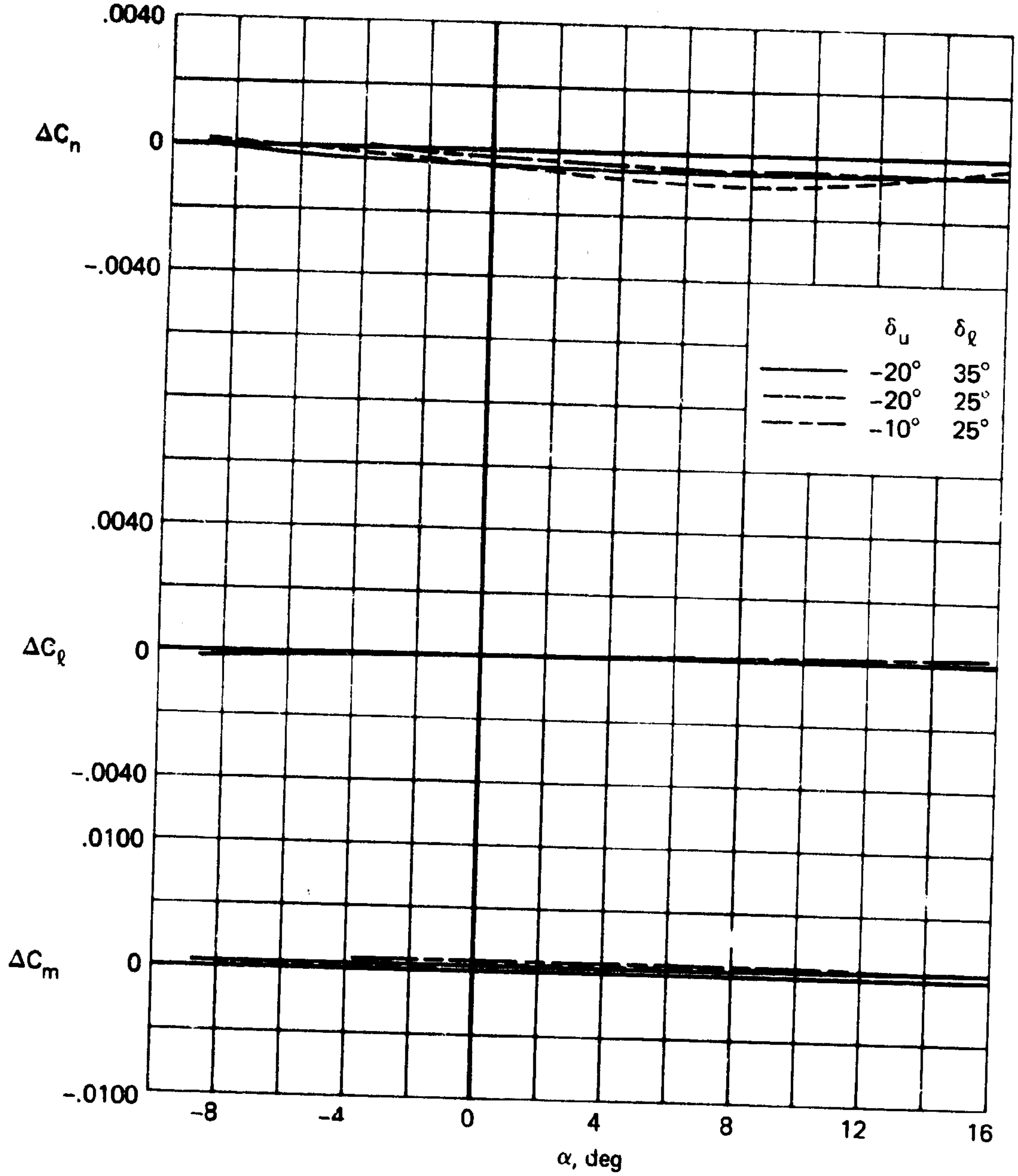
(d) $M = 1.1$, $p_r = 3.9$, $Re = 1.56 \times 10^6$

Figure 14.- Continued.



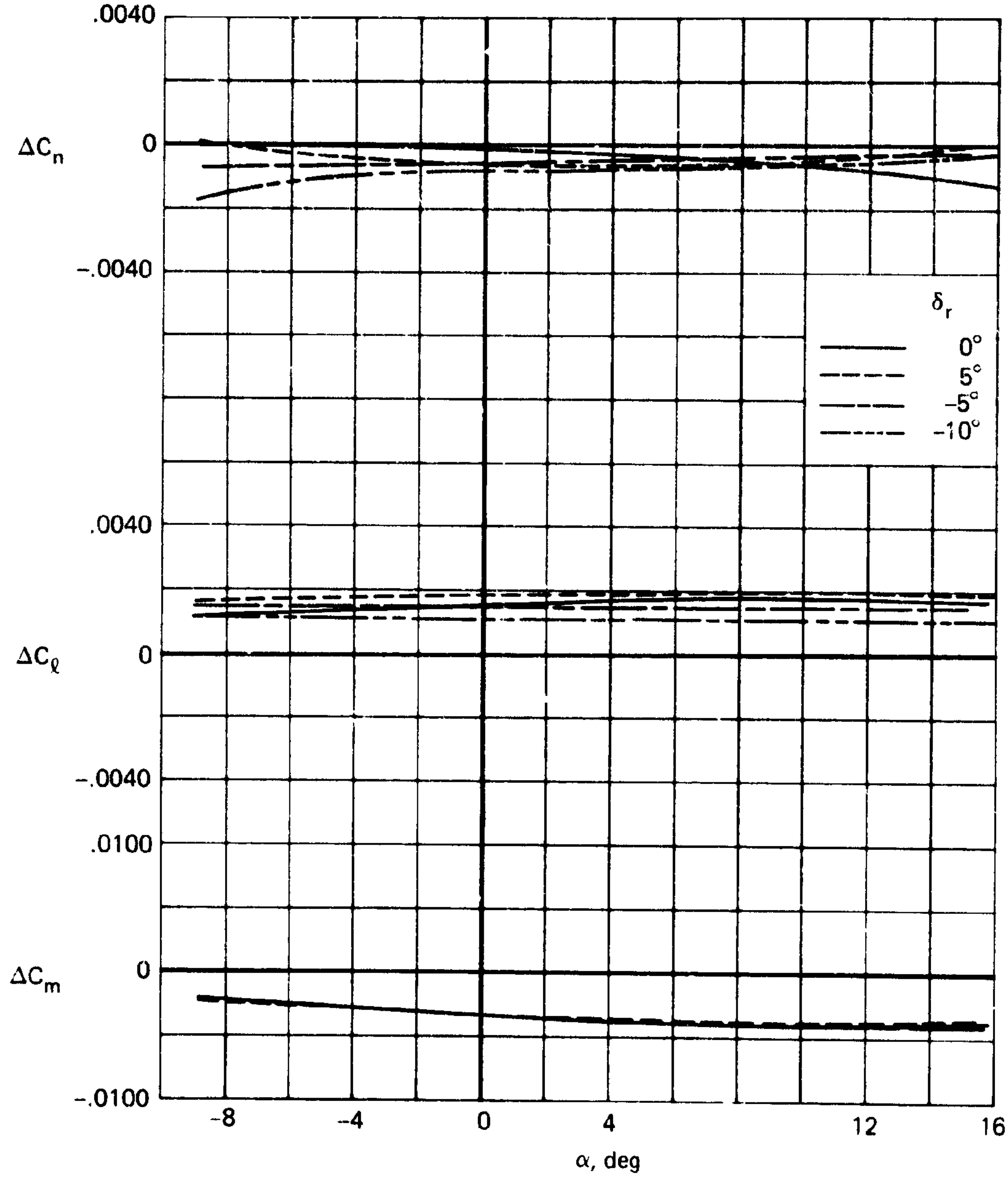
(e) M = 1.3, p_r = 4.4, Re = 1.56×10^6

Figure 14.- Continued.



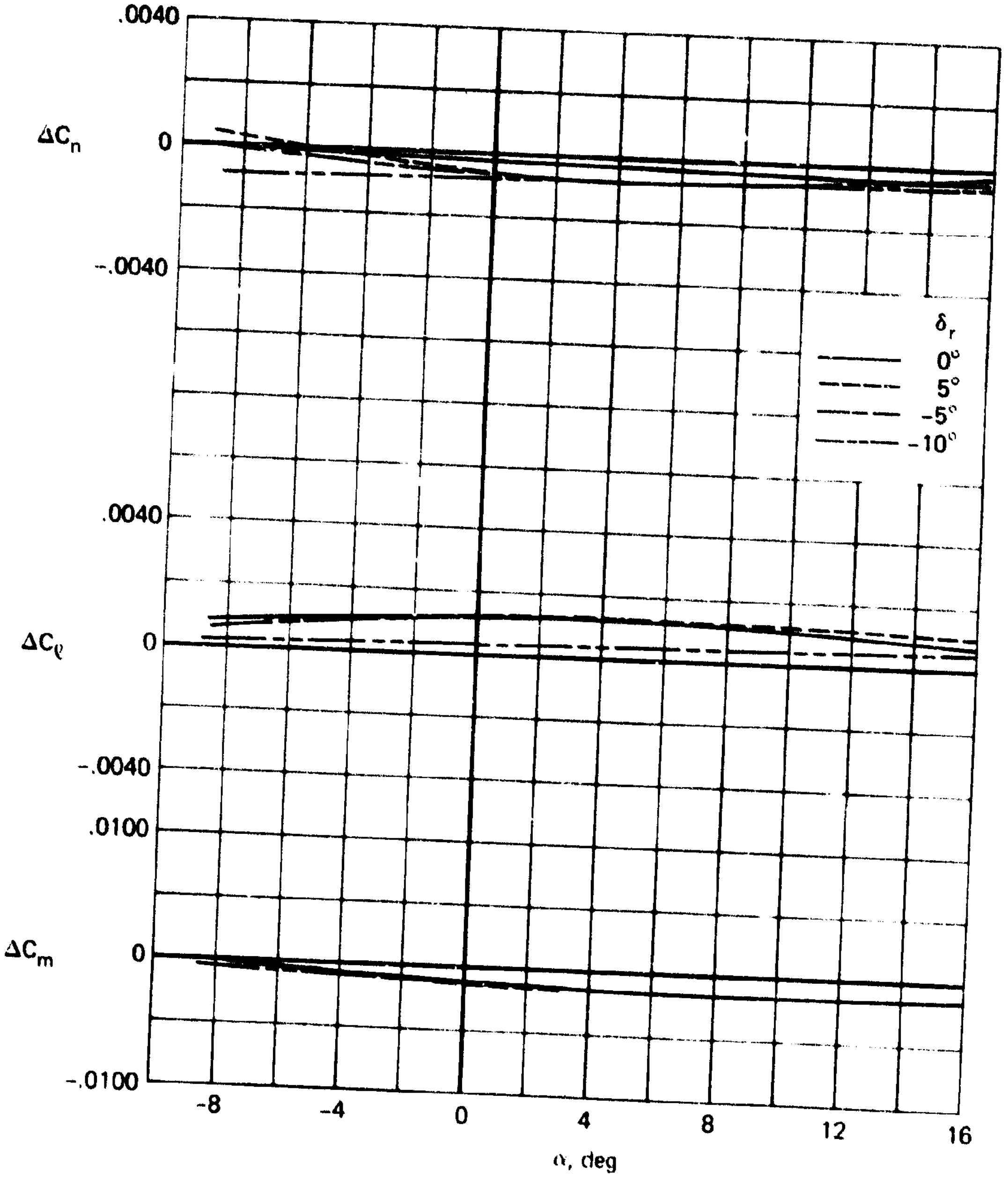
(f) $M = 1.7$, $p_r = 5.2$, $Re = 1.44 \times 10^6$

Figure 14.- Concluded.



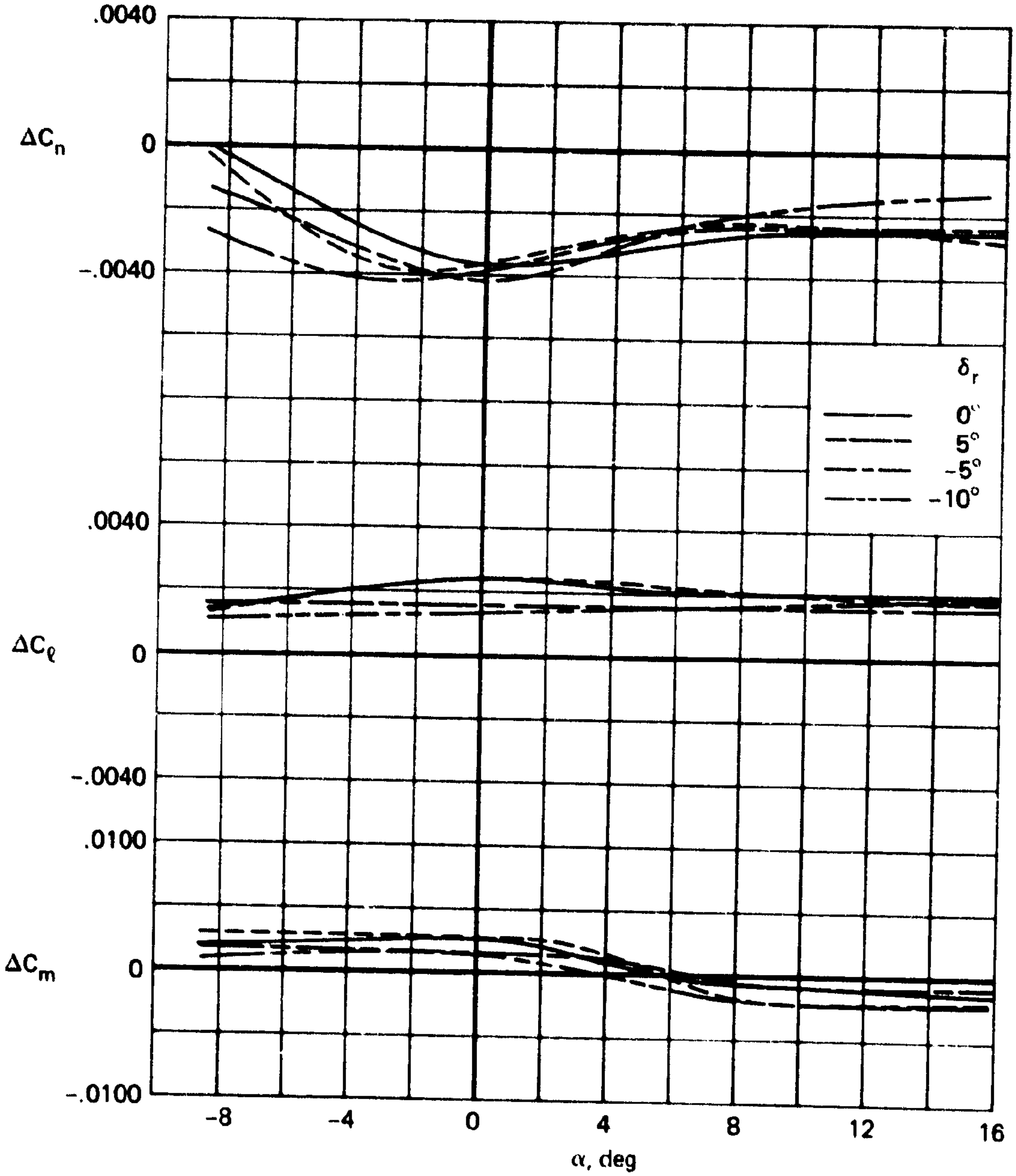
(a) $M = 0.6$, $p_r = 1.6$, $Re = 1.20 \times 10^6$

Figure 15.- The effect of rudder deflection on the jet interactions: $\frac{s}{b/2_L} = 0.61$, $\frac{s}{b/2_R} = 0.92$, $\delta_t = 15°$, $\delta_u = -20°$, $\delta_l = 35°$, air.



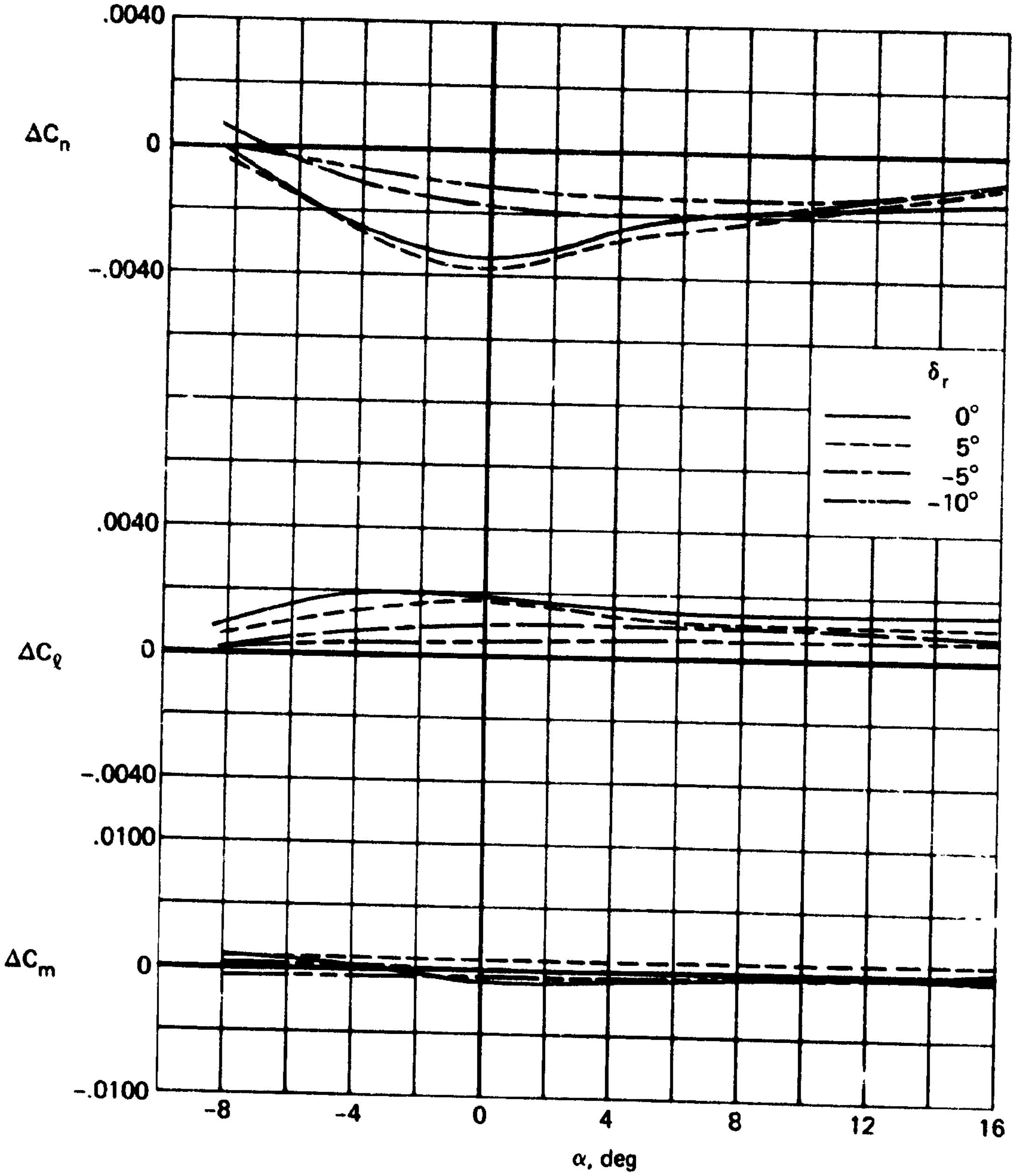
(b) $M = 0.8$, $p_r = 1.6$, $Re = 1.44 \times 10^6$

Figure 15.- Continued.



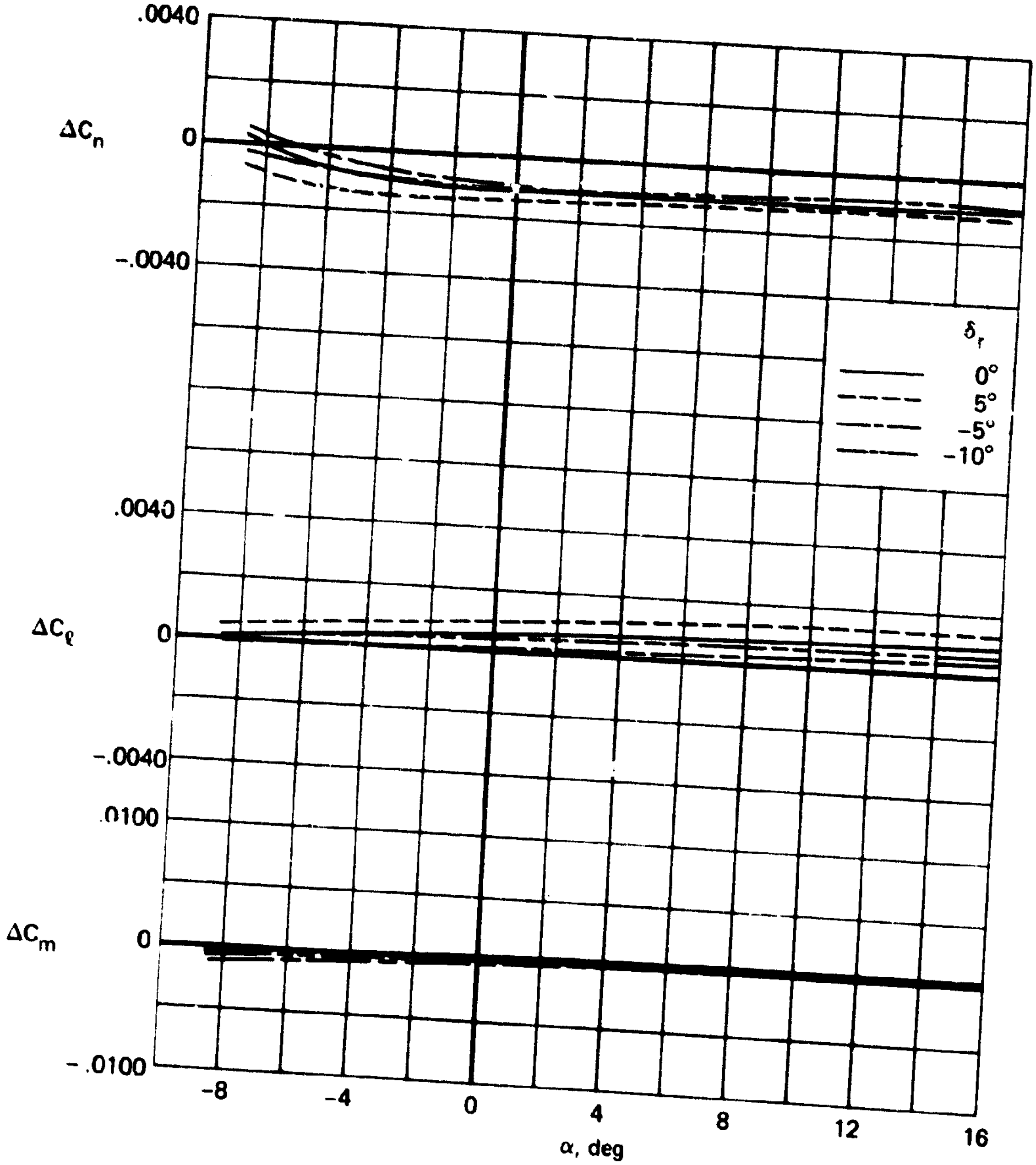
(c) $M = 0.9$, $p_r = 2.9$, $Re = 1.50 \times 10^6$

Figure 15.- Continued.



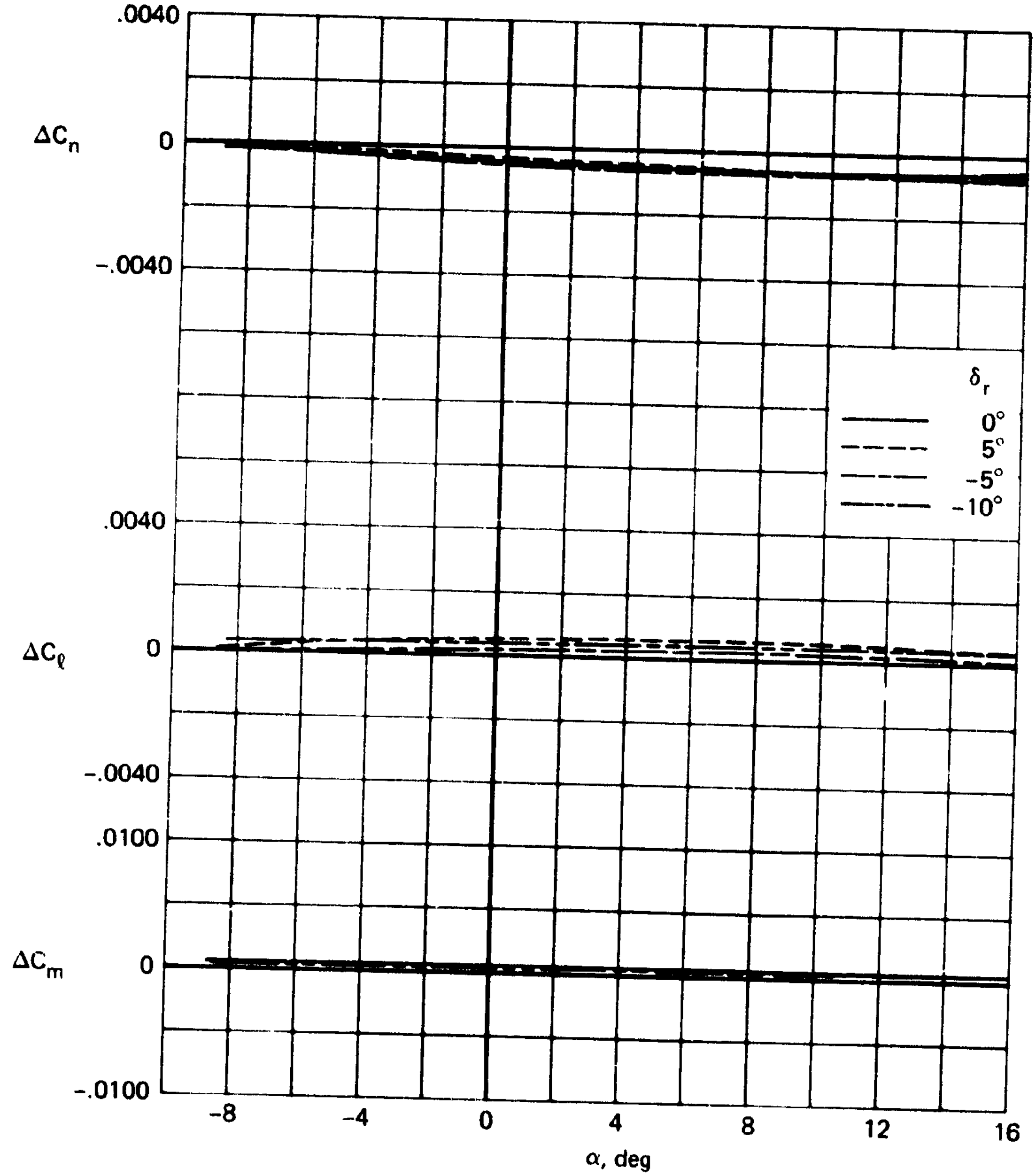
(d) $M = 1.1$, $p_r = 3.9$, $Re = 1.56 \times 10^6$

Figure 15.- Continued.



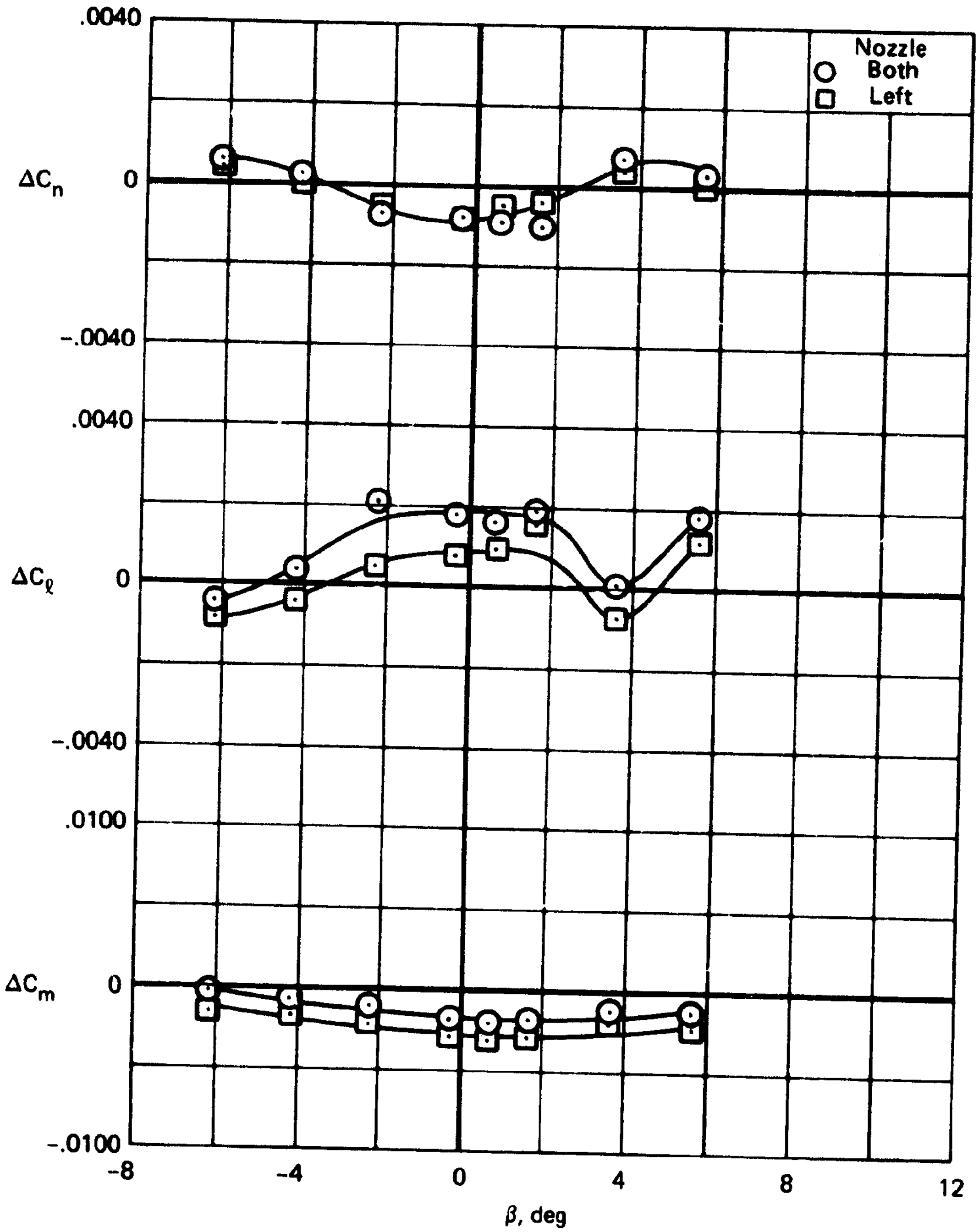
(e) M = 1.3, p_r = 4.4, Re = 1.56×10^6

Figure 15.- Continued.



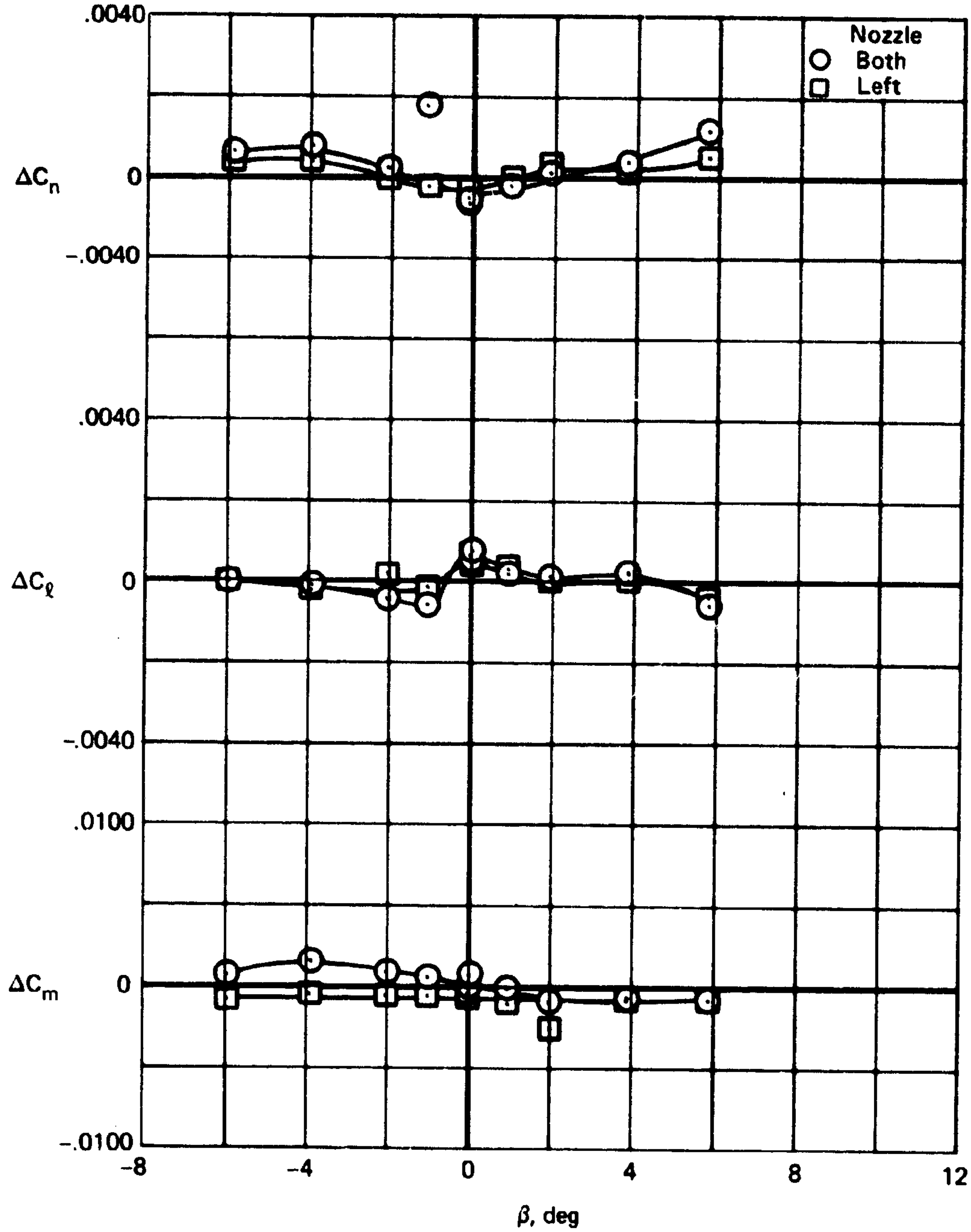
(f) $M = 1.7$, $p_r = 5.2$, $Re = 1.44 \times 10^6$

Figure 15.- Concluded.



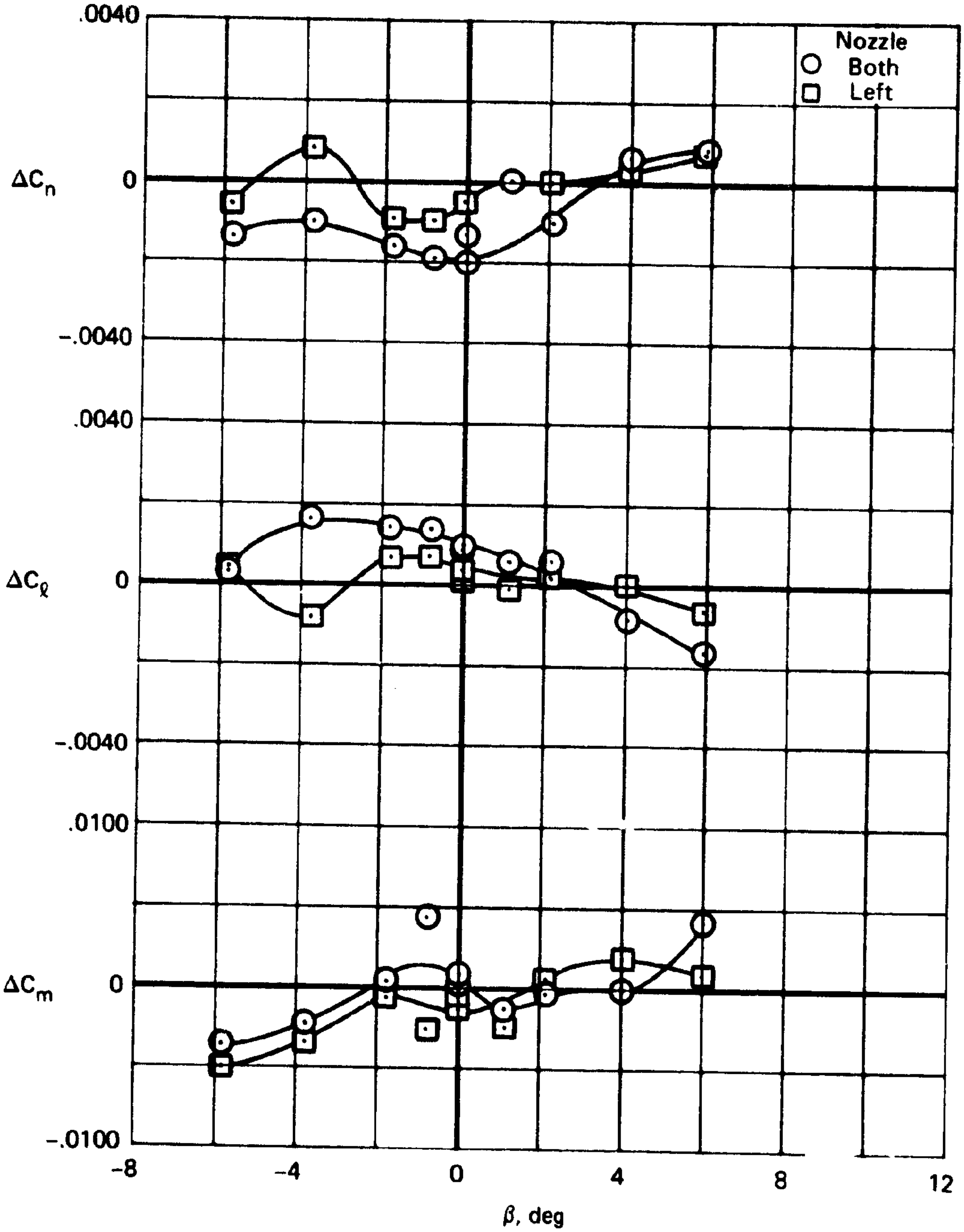
(a) $M = 0.6$, $p_r = 0.88$, $Re = 1.20 \times 10^6$

Figure 16.- The variation of the jet interactions with angle-of-sideslip: $\alpha = 6°$, $\frac{s}{b/2_L} = 0.61$, $\frac{s}{b/2_R} = 0.92$, $\delta_t = 15°$, CO_2, $\delta_u = -20°$, $\delta_l = 35°$.



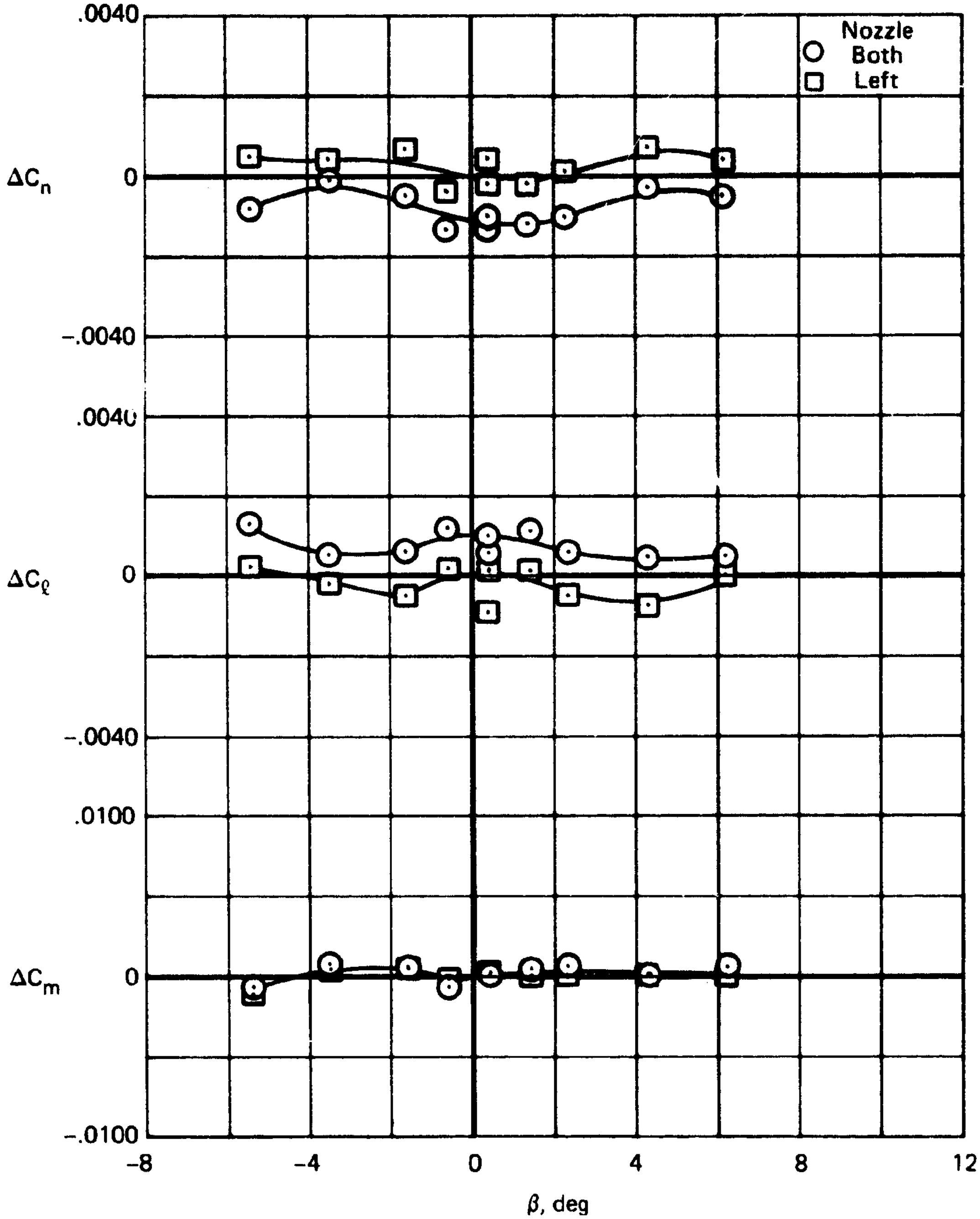
(b) $M = 0.8$, $p_r = 0.76$, $Re = 1.44 \times 10^6$

Figure 16.- Continued.



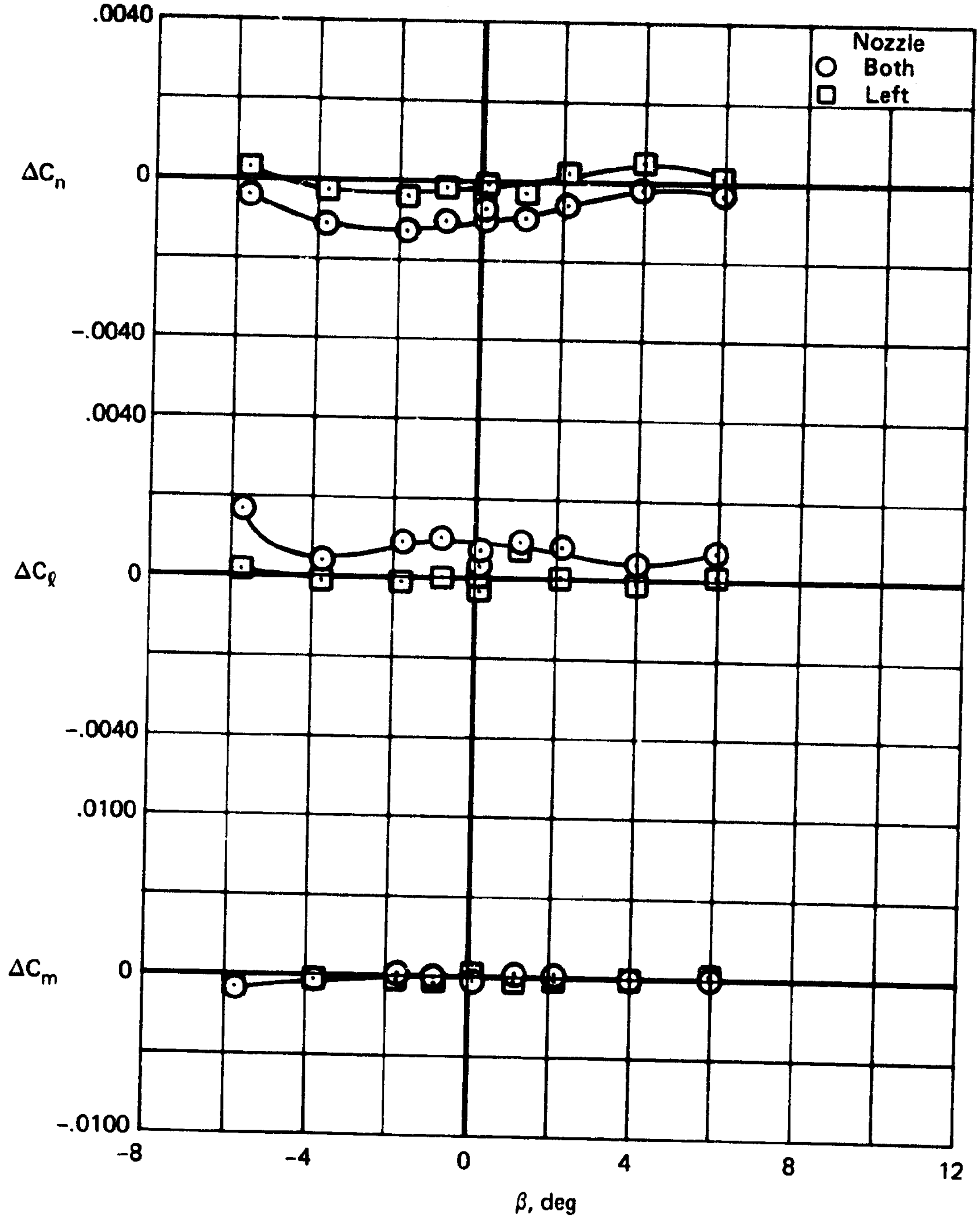
(c) M = 0.9, p_r = 1.25, Re = 1.50×10^6

Figure 16.- Continued.



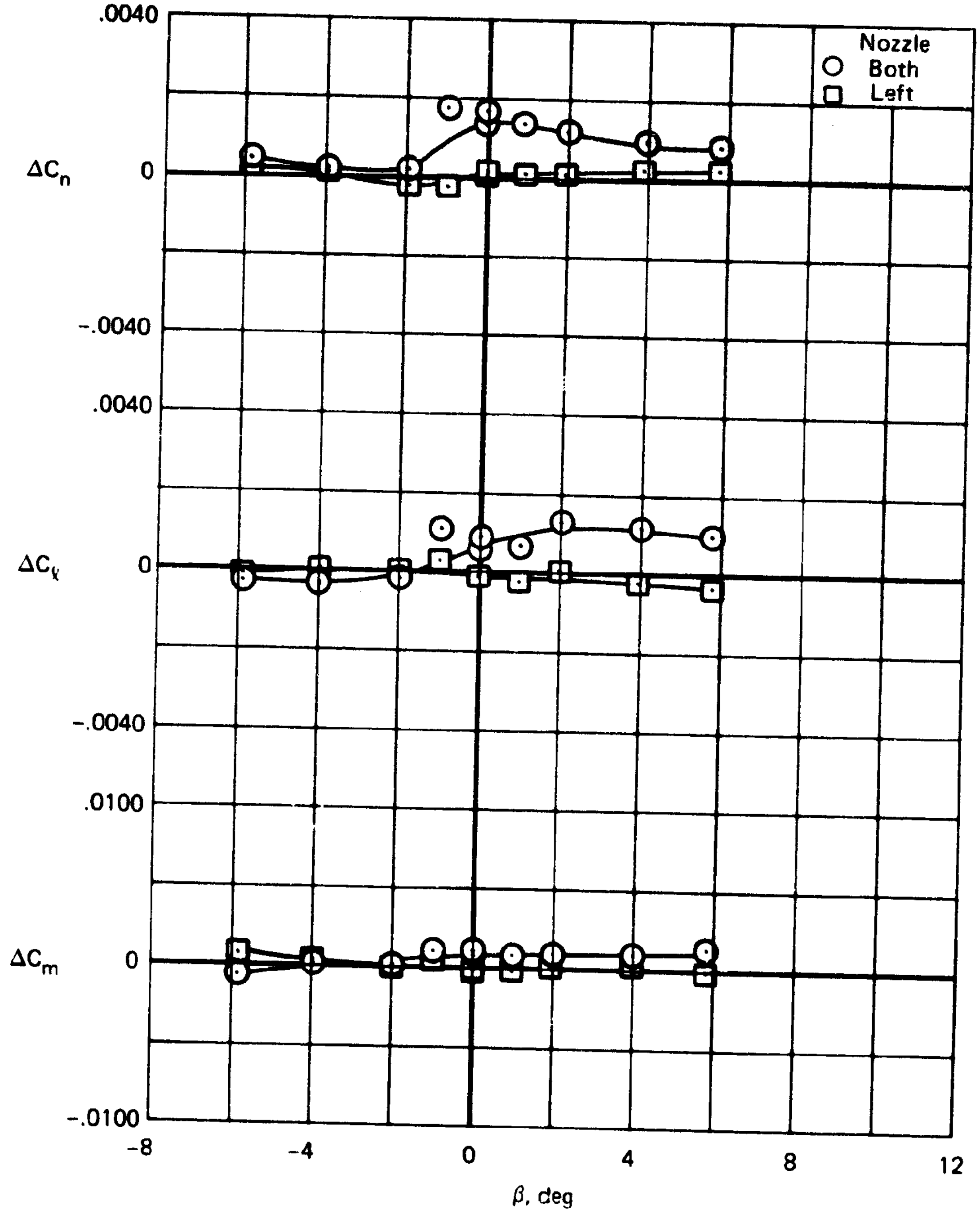
(d) $M = 1.1$, $p_r = 1.8$, $Re = 1.56 \times 10^6$

Figure 16.- Continued.



(e) $M = 1.3$, $p_r = 2.4$, $Re = 1.56 \times 10^6$

Figure 16.- Continued.



(f) $M = 1.7$, $p_r = 3.4$, $Re = 1.44 \times 10^6$

Figure 16.- Concluded.

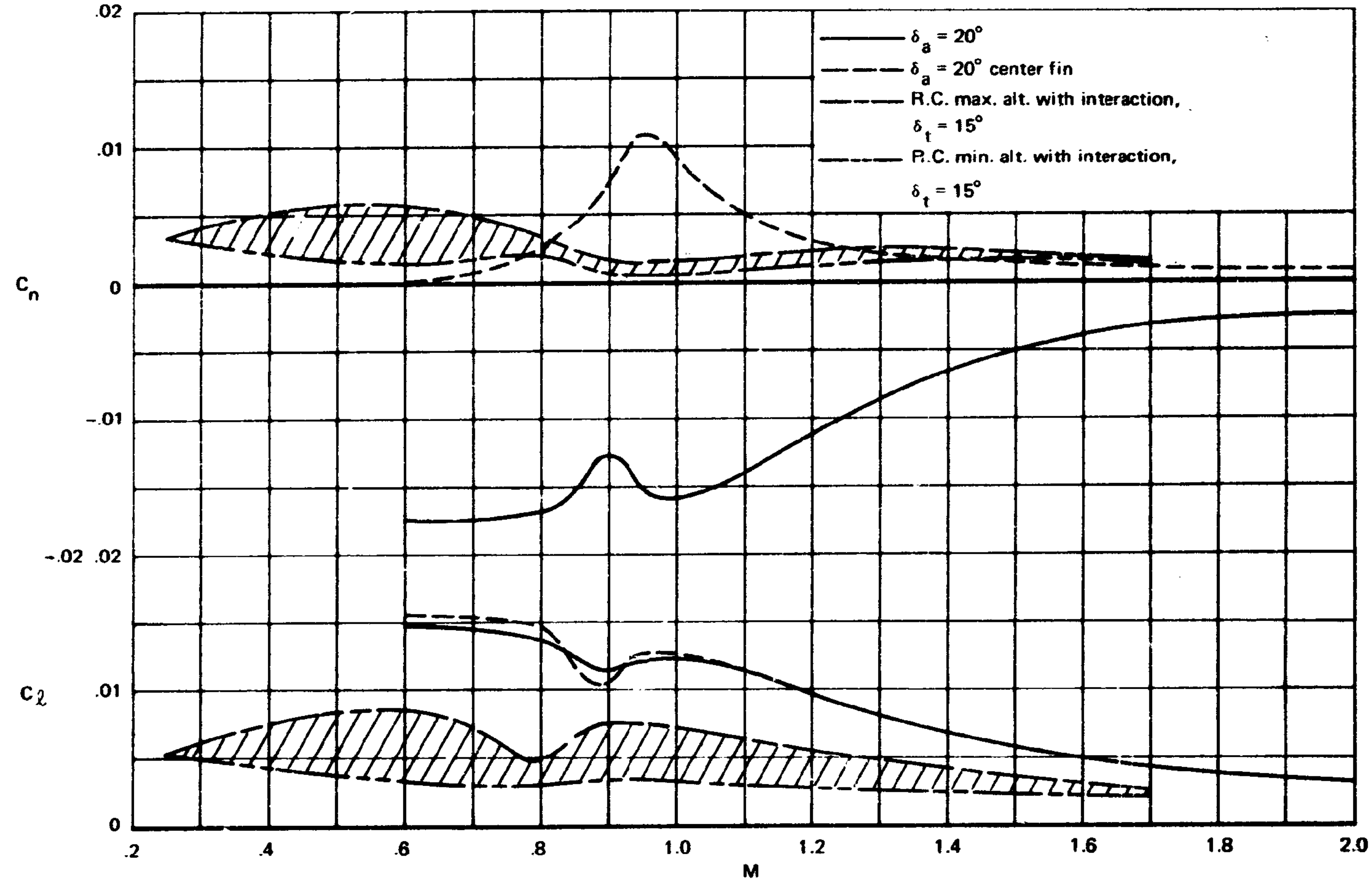


Figure 17.- A comparison of roll control means: $\alpha = 4°$, $\delta_u = -20°$, $\delta_l = 35°$, $\frac{s}{b/2_L} = 0.61$, $\frac{s}{b/2_R} = 0.92$, $\delta_t = 15°$.

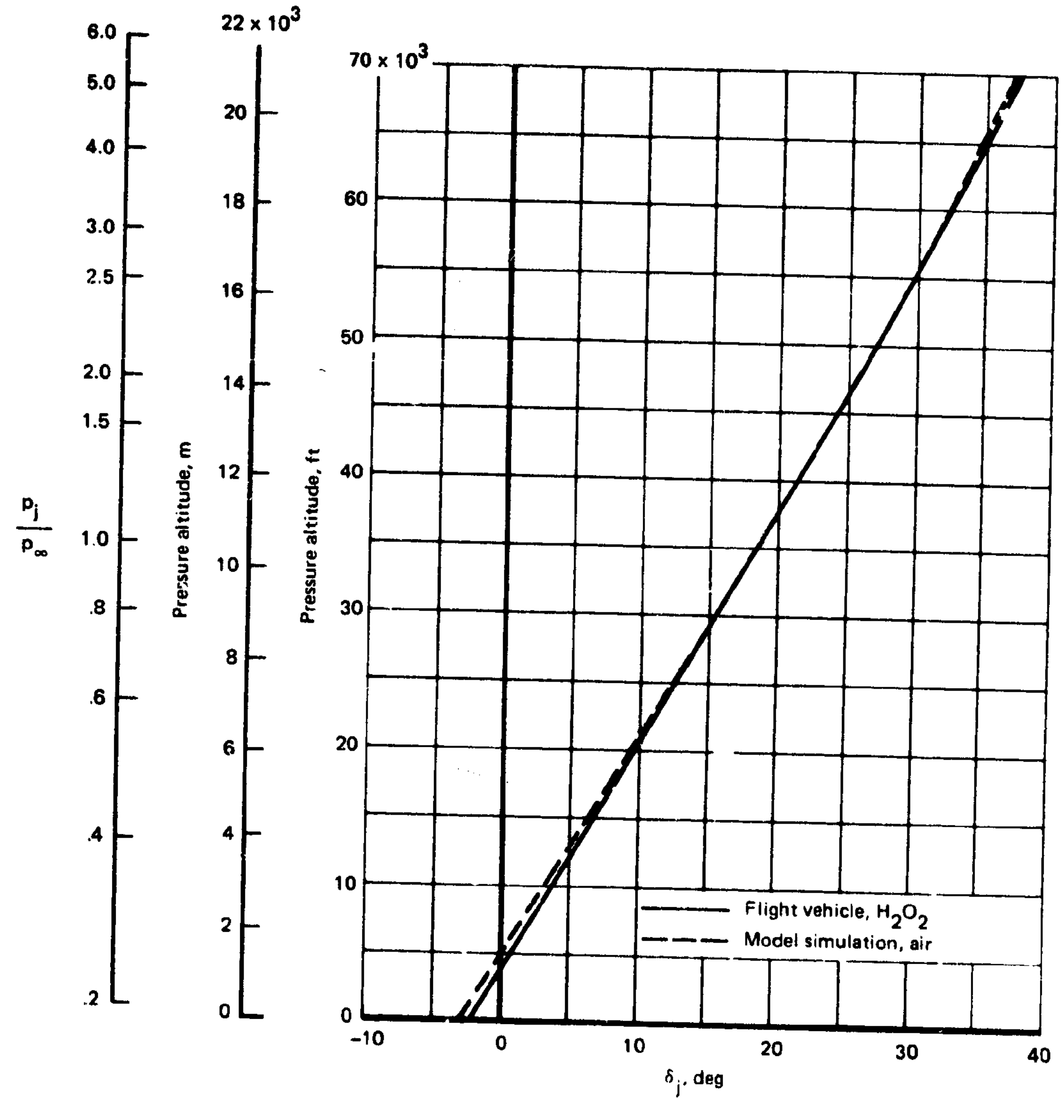


Figure 18.- Simulation of initial jet inclination angle.